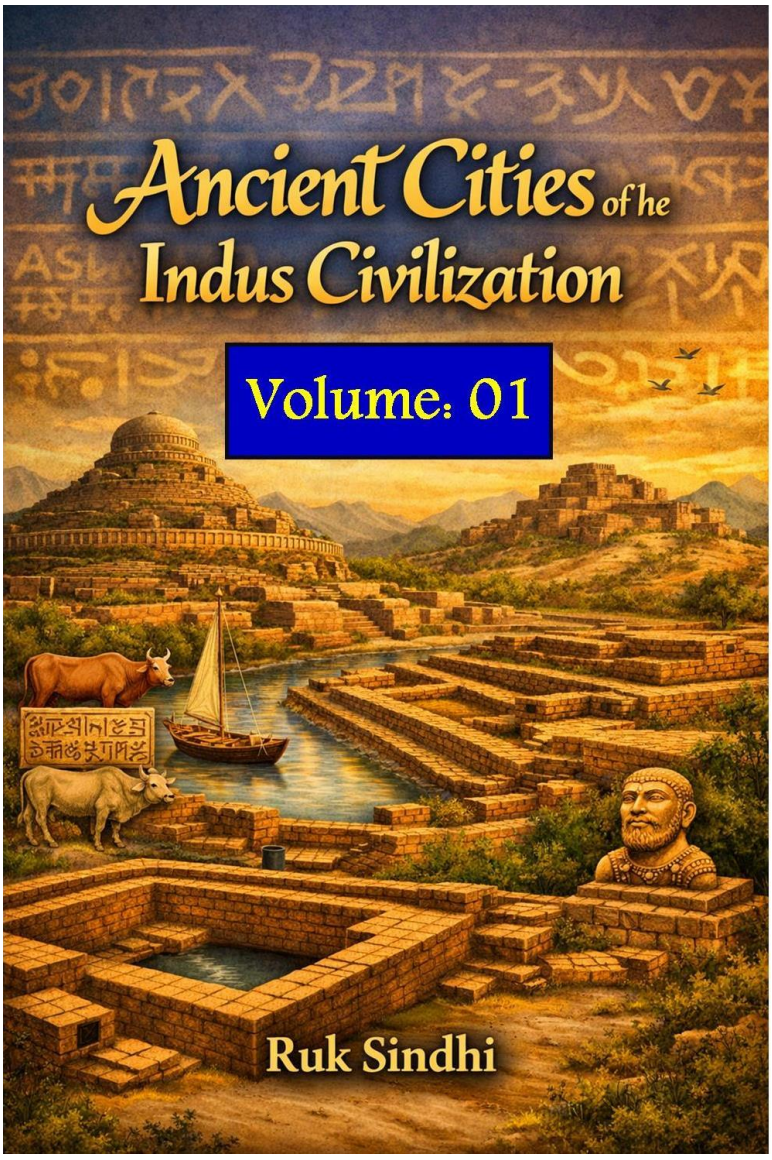
Ancient Cities of he
Indus Civilization
Volume: 01
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Ancient Cities of the Indus Civilization

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Preface

The Indus Valley Civilization is one of the oldest, most advanced, and best-organized civilizations in the world. It established enduring examples of urban planning, trade, industry, agriculture, culture, and intellectual development in human history. The cities of this civilization occupy a unique place in world history because of their sophisticated engineering, organized social structure, and extensive international trade networks.

In my book, **"Ancient Cities of the Indus Civilization,"** I present a detailed study of the archaeological sites and urban centers associated with the Indus Civilization. These sites are located not only in Sindh and other regions of Pakistan but also extend across India and Afghanistan. According to modern archaeological research, more than two thousand Indus Civilization sites have been discovered in Pakistan, India, and Afghanistan. While many important cities and settlements have been brought to light through excavation, a large number of sites still await

comprehensive scientific investigation and archaeological exploration.

This book provides detailed and carefully compiled information on more than 135 ancient cities, villages, and settlements. The work consists of four volumes, each comprising approximately three hundred pages. Collectively, these volumes cover more than 135 archaeological sites associated with the Indus Civilization. Each volume systematically examines the historical background, archaeological remains, cultural connections, economic activities, and various aspects of urban life related to these ancient centers.

This book is not merely the outcome of academic research; it is also a serious effort to reintroduce the greatness of the Indus Civilization within a global context. Special attention has been given to urban planning, river systems, trade routes, cultural continuity, and interregional connections. Through this approach, readers will gain a deeper understanding of the historical significance of the Indus Civilization and its fundamental contribution to the development of human civilization.

"Ancient Cities of the Indus Civilization" is an important scholarly resource for researchers, students, teachers, historians, and general readers

alike. It is hoped that this work will encourage new directions in the study of the ancient history and cultural heritage of Sindh and the broader South Asian region, while also strengthening global awareness of the Indus Civilization.

This remarkable heritage of the Indus Civilization is not merely a legacy of the past; it is a luminous chapter in the intellectual, social, and cultural journey of humanity. Its scientific study, preservation, and promotion remain a collective responsibility for all of us.

Ruk Sindhi

Karachi, June 2026

Chapter One

Ancient Cities of the Indus Civilization

The Indus Civilization is one of the world's oldest and most prosperous human civilizations. Compared with its contemporary civilizations of Egypt and Mesopotamia, it left a deeper impact across a much wider geographical region. Modern archaeological excavations and scientific research have demonstrated that this civilization was not confined to a single limited area; rather, it represented a highly organized, peaceful, and advanced society whose foundations were laid approximately 9,500 years ago.

1. Geographic Extent and Present-Day Boundaries

When viewed through the lens of modern political and geographical boundaries, the archaeological sites of the Indus Civilization are found

throughout all provinces of present-day Pakistan (Sindh, Balochistan, Punjab, and Khyber Pakhtunkhwa), as well as in parts of Afghanistan (such as Shortugai) and various states of India, including Gujarat, Rajasthan, Haryana, and Punjab.

Approximately 9,500 years ago, these regions collectively fell within the social, economic, and political sphere of influence of the people who developed and sustained the Indus Civilization. Archaeological surveys and excavations conducted to date have identified nearly 2,000 sites associated with this civilization. While some of these sites have undergone systematic scientific excavation, many others remain as unexplored mounds and ruins, still awaiting the revelation of the historical secrets concealed within them.

2. Chronology of the Indus Civilization

The Indus Civilization evolved through several developmental stages, progressing from an early village-based culture to a highly sophisticated urban civilization. Archaeological evidence suggests that many of its settlements remained occupied from approximately 7500 BCE until around 1500 BCE. For a clearer understanding of its historical development, the civilization may be divided into three major phases:

A. The Earliest Period: The Beginning of Rural Development

The oldest foundations of this civilization date back to around 7500 BCE.

- **Lakhan-jo-Daro:** Considered one of the earliest proto-urban and industrial developmental sites within the broader Indus cultural sphere.
- **Mehrgarh:** A site where human communities first abandoned a purely hunting-based lifestyle and began building permanent settlements, domesticating animals, and practicing agriculture through the cultivation of crops and vegetables.
- **Kili Gul Muhammad (c. 4200 BCE):** This site reflects further cultural development during the early period, providing evidence for some of the earliest forms of pottery production.

B. Early Phase: The Rural Cultural Tradition (Early Harappan Phase)

This period extends roughly from 3500 BCE to 2300 BCE. During this era, communities learned to establish permanent villages and develop distinctive local cultural traditions. Important settlements of this phase include:

- **Amri (Dadu, Sindh):** Famous for its distinctive painted pottery and for illustrating the cultural evolution that preceded the urban phase.
- **Kot Diji (Khairpur, Sindh):** Known for its fortification walls and early use of baked bricks, features that later became fundamental elements of Indus urbanism.

C. The Zenith of Urban Civilization (Mature Harappan Phase)

This represents the most advanced and flourishing stage of the Indus Civilization. During this period, architecture, urban planning, drainage systems, and trade reached remarkable levels of sophistication. Major urban centers of this phase include:

- **Mohenjo-daro (Larkana, Sindh):** Renowned worldwide for its Great Bath, well-planned streets, and highly developed civic administration.
- **Harappa (Punjab):** Another major political and commercial center of the civilization, where numerous seals, tools, and other artifacts have been discovered.
- **Chanhu-daro (Shaheed Benazirabad/Nawabshah, Sindh):** A specialized industrial center known for the

manufacture of carnelian beads, cosmetic items, and various craft products.

3. Foundations of Modern Scientific Research

In the second edition of this book, detailed research articles are presented on several of the most significant and foundational settlements of the Indus Civilization.

The study of these ancient sites is not based on legends or speculative narratives; rather, it relies upon evidence obtained through modern scientific methods, including radiocarbon dating, satellite mapping, archaeobotany, and other archaeological techniques. This book aims to guide readers through the remarkable heritage of the past—a heritage that remains a source of pride for Sindh and the wider region today.

Aamlano

The ancient archaeological site of Aamlano is located approximately 34 kilometers northwest of Karachi, at the confluence of the Mol and Malir streams. This site is considered an important archaeological settlement associated with the urban phase of the Indus Valley Civilization. Archaeological evidence indicates that the settlement extends across an area of approximately 91 meters, suggesting that it was a relatively organized but limited habitation site.

At present, the remains of the site are fragmentary, which restricts a complete understanding of its structural layout and urban organization. Nevertheless, based on the available archaeological indicators, researchers have associated Aamlano with the urban civilization of the Indus Valley. Due to its strategic location at the junction of the Mol and Malir streams, it is likely that Aamlano held significance in antiquity for water accessibility, agricultural activities, and regional trade routes.

Smaller sites such as Aamlano are of considerable importance for understanding the broader

civilizational network of the Indus Valley Civilization, as they provide valuable insight into the social, economic, and geographical relationships between major urban centers and smaller settlements. The study of such sites contributes significantly to understanding the spread of Indus culture and patterns of human habitation in the coastal and semi-mountainous regions of Sindh.

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Ahmad Shah

Abstract

The province of Sindh occupies a central place in the prehistoric and protohistoric development of South Asia. Numerous archaeological sites located in the valleys and foothills of the Kirthar Range provide valuable evidence regarding the evolution of early human settlements and cultural traditions. Among these sites is Ahmad Shah, situated in the Baran Valley of Dadu District. Archaeological discoveries from the site indicate its association with the Rural Culture Phase and suggest continuity into the Chalcolithic and Bronze Age periods. This article examines the geographical setting, archaeological evidence, historical significance, and cultural importance of the Ahmad Shah site.

Introduction

Sindh has long been recognized as one of the earliest centers of human civilization in South Asia. Archaeological investigations have revealed a succession of settlements dating from the Neolithic and Chalcolithic periods to the urban

phase of the Indus Valley Civilization. The Ahmad Shah site, located southeast of Arijo village on the eastern side of the Baran Valley in Dadu District, represents one of the important rural settlements that contributed to the cultural development of the region before the emergence of large urban centers.

Geographical Setting

The Ahmad Shah archaeological site is located within the Baran Valley, a historically significant region situated along the foothills of the Kirthar Mountains in western Sindh. The valley contains numerous prehistoric and protohistoric settlements, indicating that it served as an important zone of human occupation. Its proximity to seasonal watercourses, fertile lands, and natural resources would have provided favorable conditions for early agricultural and pastoral communities.

Archaeological Evidence

Archaeological surveys conducted at Ahmad Shah have yielded a variety of artifacts that demonstrate the presence of an organized rural settlement. The principal discoveries include:

- Flint blades

- Stone cores
- Pottery fragments and ceramic vessels
- Evidence associated with the Chalcolithic or Bronze Age

These artifacts suggest that the inhabitants possessed knowledge of stone-tool production, pottery manufacturing, and subsistence practices related to agriculture and animal husbandry. Similar material remains have been recovered from other important archaeological sites in Sindh, including Amri, Ali Murad, and Ghazi Shah, indicating regional cultural connections and shared technological traditions.

Investigations by N. G. Majumdar

The renowned archaeologist Nani Gopal Majumdar conducted extensive archaeological surveys throughout Sindh during the late 1920s and early 1930s. His explorations led to the identification of numerous prehistoric sites across the province. At Ahmad Shah, Majumdar documented evidence of the Chalcolithic and Bronze Age periods, demonstrating that the settlement was part of a broader cultural landscape characterized by technological innovation and social development.

Majumdar's pioneering work significantly enhanced scholarly understanding of prehistoric Sindh and laid the foundation for subsequent archaeological research in the region.

Cultural and Historical Significance

The Ahmad Shah site represents an important link between the early rural communities of Sindh and the later urban developments associated with the Indus Valley Civilization. The discovery of flint tools and pottery indicates a community engaged in agricultural production, animal husbandry, and craft activities. Such settlements formed the economic and cultural basis from which more complex urban societies eventually emerged.

The site also contributes to understanding the cultural sequence of western Sindh, particularly the transition from village-based communities to the sophisticated urban centers that flourished during the Mature Harappan period.

Conclusion

The archaeological site of Ahmad Shah is an important source of information regarding the prehistoric cultural development of Sindh. The presence of flint tools, stone cores, pottery, and Bronze Age materials demonstrates that the

Baran Valley supported human occupation and cultural activity for an extended period. The site provides valuable evidence for the study of early rural societies and their role in the broader trajectory of the Indus Valley Civilization. Future archaeological excavations and scientific investigations may further illuminate the chronology, economy, and cultural affiliations of this significant settlement.

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Aarib jo Thaano

The ancient archaeological remains of Aarib jo Thaano are located in Dadu District, approximately 5 kilometers south of Shah Jo Kothriyo, at the foothills of the Nariyaro Mountains. The site occupies a geographically significant position along the piedmont zone, which may have supported ancient human settlement and communication routes.

Archaeologist Henry Cousens Lambrick (Lambrick) reported the discovery of copper fragments from this settlement, indicating the possible use of metallurgy and craft-related activities in the area. Furthermore, archaeologist Nani Gopal Majumdar identified this settlement as a habitation site associated with the inhabitants of the urban phase of the Indus Valley Civilization.

The archaeological significance of Aarib jo Thaano lies in its connection with the wider settlement network of the Indus Civilization in the Kirthar piedmont region of Sindh. Sites such as this provide valuable evidence regarding the

distribution of settlements beyond major urban centers and help scholars understand patterns of habitation, resource utilization, and cultural expansion during the Bronze Age in Sindh.

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Alamgirpur

Introduction

Alamgirpur is a small village located in the Meerut District of the Indian state of Uttar Pradesh, approximately 25 kilometers west of Meerut city. It is widely regarded as the easternmost known site of the famed Indus Valley Civilization (IVC), also known as the Harappan Civilization. Situated in the fertile plains of the Ganga-Yamuna Doab, Alamgirpur lies in the floodplains of the Hindon River, which flows approximately three kilometers to its east. This strategic geographical position makes the site highly significant for understanding the expansion, trade networks, agricultural practices, and cultural interactions of the Harappan Civilization.

Archaeologists consider Alamgirpur a crucial settlement demonstrating the eastern expansion of Harappan culture into the Ganga-Yamuna plains. Consequently, the site provides important evidence regarding the geographical reach of the

Indus Civilization and its cultural continuity with later traditions, particularly the Painted Grey Ware (PGW) culture.

Geographical Setting and Site Structure

The ancient mound of Alamgirpur is locally known as *Parshuram ka Tila* or *Parshuram's Mound*. The mound measures approximately 60 meters from east to west and 50 meters from north to south, with an average elevation of six meters above the surrounding sugarcane and wheat fields. This raised elevation indicates multiple phases of human occupation, resulting in the accumulation of cultural deposits over time.

Discovery and Early Excavations

The first archaeological excavation at Alamgirpur was undertaken in 1958 by the regional camp committee of the Bharat Sewak Samaj. During these initial investigations, pottery fragments and beads were discovered. Subsequently, archaeologist Y. D. Sharma of the Department of Archaeology's North-Western Circle examined the recovered materials and observed the presence of Painted Grey Ware, terracotta cakes, and faience bangles, all suggesting a probable association with the Harappan Civilization.

Based on these findings, Sharma initiated a more systematic excavation, which eventually established Alamgirpur as a site of considerable archaeological significance.

Cultural Phases and Archaeological Evidence

Excavations at Alamgirpur revealed four distinct cultural periods, initially believed to have been separated by intervals or breaks in occupation.

Period I: Harappan Occupation

The earliest occupational layer at Alamgirpur, approximately six feet thick, belonged to the Harappan Civilization. Pottery discovered from this phase included:

- Dish-on-stand vessels
- Pointed-base goblets
- Straight-sided dishes
- Cylindrical vases
- Beakers

These ceramics were decorated with black painted geometric motifs on a red slip, closely resembling typical Harappan artistic traditions. Evidence of cloth impressions was also discovered, suggesting textile production or use during this phase.

Additionally, animal figurines, human figurines, beads, and bowls were recovered, all of which corroborate the presence of Harappan culture at the site.

Period II: Painted Grey Ware Culture

The second occupational phase had an average thickness of approximately 4.5 feet. Unlike the compact brown deposits of Period I, this layer consisted of loose grey soil interspersed with bands of burnt earth and ash.

Artifacts recovered during this period included:

- Painted Grey Ware (PGW) pottery
- Black-slipped ware
- Black-and-red ware
- Plain red ware

Among the notable finds were two wheeled terracotta toys representing a bull and a ram. These toys featured incised body markings and nostril perforations, likely intended for threading strings, suggesting their use as movable toys.

This period also showed evidence of iron technology, although copper continued to be used. Architectural remains, including fragments of mud walls and clay lumps bearing reed

impressions, suggest house construction and settlement continuity.

According to Y. D. Sharma:

“On a part of the mound this surface was apparently utilized during Period II for threshing or pounding operations as suggested by consolidated hard surface possessing mortar depressions.”

Periods III and IV

The deposits of Period III were less than one foot thick and confined to certain areas of the mound. Artifacts from this period primarily consisted of domestic pottery such as jars, cooking basins, and bowls, indicating limited occupational activity.

Period IV, approximately 30 centimeters thick, yielded medieval glazed pottery fragments. Structural remains, including walls and floors constructed with *lakhauri* bricks, were also found. Sharma suggested that this phase likely belonged to the seventeenth or early eighteenth century CE, possibly associated with the Mughal emperor Aurangzeb Alamgir, from whom the site may have derived its name.

Renewed Excavations and Scientific Investigations

Several unresolved questions regarding Alamgirpur prompted renewed archaeological investigations, including:

1. Were there pre-Harappan settlements east of the Yamuna River?
2. Was the area first occupied by Harappans or local communities?
3. Did the earliest Harappan occupation belong to the Mature Harappan or Late Harappan phase?

To address these questions, Professor Ravindra Nath Singh of Banaras Hindu University initiated fresh excavations in 2008. The project involved collaboration with researchers from the University of Cambridge, Deccan College Pune, and the Directorate of Uttar Pradesh State Archaeology.

The principal objectives of the excavation included:

- Reconfirming the cultural sequence
- Establishing scientific chronology for cultural periods
- Studying faunal and botanical remains

- Conducting palynological studies to understand human responses to climatic changes

Key Findings

The 2008 excavations largely confirmed Sharma's findings but challenged the earlier assumption of a stratigraphic break between the Harappan and PGW phases. Archaeological evidence revealed no clear interruption between Periods I and II.

Archaeologist Dilip Chakrabarti criticized the earlier interpretation, arguing that differences in soil composition alone could not justify the conclusion of a cultural discontinuity.

Furthermore, geoarchaeological and wood-charcoal studies conducted at the University of Cambridge found no major environmental or climatic distinction between the two periods.

Faunal Evidence and Economy

Faunal remains recovered from Alamgirpur indicate that the local economy primarily depended upon:

- Cattle
- Buffalo

Evidence suggests that sheep and goats may have been introduced during the Harappan phase, while horse remains appeared only during the PGW period. Domestic pigs played a marginal role throughout all occupational phases.

Chronology and Historical Significance

Scientific dating conducted through the AMS Laboratory at Oxford confirmed Harappan occupation at Alamgirpur beyond doubt. The probable chronological range for the Harappan phase at the site has been established between **2600 BCE and 2200 BCE**.

Thus, Alamgirpur firmly establishes the Harappan presence east of the Yamuna River and challenges earlier assumptions regarding the civilization's geographical limits. The site serves as a vital link for understanding cultural interaction between the Indus Civilization and the Ganga-Yamuna plains.

Conclusion

Alamgirpur is one of the most important archaeological sites for understanding the eastern expansion of the Indus Valley Civilization. It provides valuable evidence regarding Harappan settlement patterns, material culture, agricultural

economy, and interactions with subsequent cultural traditions. Modern scientific excavations and AMS dating techniques have conclusively demonstrated Harappan occupation beyond the Yamuna River, significantly reshaping scholarly understanding of the civilization's territorial extent.

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Ali Murad

Introduction

Ali Murad is one of the significant archaeological sites of Sindh associated with the Indus Valley Civilization (IVC). Located in the Dadu district, this site holds considerable archaeological importance due to its geographical position, defensive significance, association with ancient trade routes, and the discovery of Harappan cultural materials. Archaeological evidence suggests that Ali Murad was not only an important settlement of the Bronze Age but also served as a crucial link between Sindh and Balochistan in terms of trade and cultural interaction.

Geographical Location and Discovery

The archaeological remains of Ali Murad are situated approximately twenty miles south of Dadu city in the form of a mound within a sandy plain. The site was first surveyed and documented by the eminent archaeologist N. G. Majumdar

between 1928 and 1931. Alongside Ali Murad, Majumdar also identified Bronze Age settlements at Lohri and Ghazi Shah, all situated along an ancient trade route.

This route extended southward through Kohistan, passing near Lake Manchar and continuing toward the area where the Baran stream entered the plains. According to Majumdar, ancient staging settlements were located at intervals of approximately 12 to 15 miles along this route. These settlements were consistently found near springs and stream channels, indicating that they were strategically established to facilitate trade, movement, and habitation.

Architectural Features and Defensive Importance

Excavations at Ali Murad revealed the remains of a fortified settlement measuring approximately 250 yards in both length and width. The fortification was constructed using stones measuring nearly two feet in length, one foot in width, and five feet in thickness, demonstrating the advanced architectural capabilities of the inhabitants. The main entrance of the fort was positioned toward the south, while a well and traces of residential structures were discovered within the enclosure.

Archaeologist H. T. Lambrick argued that the fort at Ali Murad was likely constructed for defensive purposes, primarily because the nearby Phusi Pass served as a principal route between Balochistan and Sindh. Given the strategic importance of this corridor, it is plausible that the local inhabitants erected defensive structures to protect themselves against possible incursions from groups entering through the pass. Therefore, the fortification may be interpreted as part of a broader regional security strategy.

Cultural and Archaeological Remains

The pottery recovered from Ali Murad is characterized by a red surface decorated with black painted motifs, a distinctive feature commonly associated with Harappan material culture. In addition, the site yielded several artifacts, including pottery bearing pipal-leaf motifs, terracotta figurines of bulls, stone blades, bronze or copper flat axes, and agate beads.

These artifacts closely resemble materials excavated from Harappa and Mohenjo-daro, suggesting strong cultural, economic, and social connections between the inhabitants of Ali Murad and the larger urban centers of the Indus Valley Civilization. Such similarities indicate not only cultural interaction but also the existence of an

organized urban and commercial network extending across the region.

Conclusion

Ali Murad is recognized as an important settlement of the urban phase of the Indus Valley Civilization and appears to have been a large and strategically significant Bronze Age community. Its geographical position, association with ancient trade routes, fortified architectural features, and Harappan-style cultural remains collectively demonstrate that Ali Murad constituted an integral part of the broader urban and commercial system of the Indus Civilization. Consequently, further scientific excavation and interdisciplinary research at the site may substantially contribute to a deeper understanding of Sindh's ancient history and the regional organization of the Indus Civilization.

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Allahdino

Introduction

Allahdino is an important archaeological site of the Indus Valley Civilization (Harappan Civilization), located approximately 40 kilometers east of Karachi in the province of Sindh, Pakistan. Although relatively small in size, the artifacts unearthed from this settlement demonstrate that Allahdino was not merely an ordinary rural habitation but a socially and economically organized community closely linked to the administrative, agricultural, and craft production systems of the Harappan world. Archaeologists regard Allahdino as one of the most significant examples of a coastal settlement of the Indus Civilization, flourishing approximately between 2600 BCE and 2000 BCE.

Geographical Location and Significance

Allahdino is situated near the coastal belt of Sindh and extends over an area of approximately 1.4 hectares. Its strategic location east of Karachi gives it considerable importance in understanding the coastal trade and agricultural activities of the

Indus Civilization. Although the settlement was not fortified, its planned architectural arrangement and residential organization indicate that it played an important administrative and economic role.

Archaeologists believe that Allahdino maintained strong economic and administrative connections with major urban centers of the Indus Civilization, including Mohenjo-daro and Harappa (Kenoyer, 1998).

Excavations and Discoveries

The archaeological site of Allahdino was first excavated in 1973 by the American archaeologist Walter A. Fairservis. During these excavations, important remains such as stone foundations, wells, and residential structures were uncovered, providing new insights into the urban organization of the settlement.

In subsequent years, the site was re-excavated by the Sindh Exploration and Adventure Society (SEAS) in collaboration with international experts, including Jonathan Mark Kenoyer and Asma Ibrahim. These investigations aimed to better understand the settlement's urban layout, social hierarchy, and socioeconomic interactions.

Residential Structures and Urban Planning

Excavations at Allahdino revealed several mud-brick houses, some of which were constructed on stone foundations or raised platforms. A large multi-roomed structure was also discovered, which likely served as the residence of an influential or affluent family.

A particularly remarkable discovery was a building containing three wells with diameters ranging from only 60 to 90 centimeters. The relatively small diameter of all wells found at the site suggests a carefully regulated water management system. Scholars believe that water extracted from these wells was likely used to irrigate nearby agricultural fields (Fairservis, 1982).

The architectural arrangement of Allahdino indicates that the settlement may have functioned as an administrative center to some degree, as clear planning can be observed between residential and functional spaces.

Craftsmanship, Ornaments, and Economic Prosperity

A large number of copper objects, triangular terracotta cakes, seals, small pottery vessels, and ornaments made of precious metals were

recovered from Allahdino. Notably, some jars contained gold and silver ornaments, suggesting the presence of considerable wealth among certain inhabitants.

One of the most important discoveries was a belt containing 36 carnelian beads, reflecting a high degree of craftsmanship and specialized artisanal skill. Such refined workmanship indicates that highly skilled artisans resided in the settlement and may have been involved in trade-related production (Possehl, 2002).

The use of stone architecture, luxury ornaments, and finely crafted materials suggests that certain households at Allahdino enjoyed relative prosperity and social prominence.

Agriculture and Textile Production

Agriculture appears to have played a major role in the economy of Allahdino. Water drawn from wells was likely used for irrigating nearby lands, indicating the presence of an organized irrigation system.

Furthermore, archaeological evidence suggests that Allahdino may also have been associated with textile production. Similar to other Harappan centers, cotton cultivation and cloth

manufacturing likely formed part of its economic activities and trade network (Kenoyer, 1998).

Pottery and Material Remains

During excavations, archaeologists collected approximately 240,000 pottery fragments and complete vessels, which were systematically catalogued and analyzed. Such a substantial quantity of material remains highlights the extensive domestic and economic activities carried out at the site.

Conclusion

Despite its modest size, Allahdino was an exceptionally important settlement of the Indus Valley Civilization. The discoveries made at this site provide valuable insights into Harappan daily life, urban planning, craftsmanship, and socioeconomic organization. More importantly, Allahdino demonstrates that even smaller settlements within the Indus Civilization were highly organized economically, administratively, and socially.

The wells, residential buildings, ornaments, seals, and agricultural evidence from Allahdino collectively indicate that the settlement formed an integral part of the broader trade and

administrative network of the Indus Civilization. Therefore, Allahdino occupies a distinctive and significant place in the study of ancient Sindh and South Asian archaeology.

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Amri

Abstract

Amri, situated in present-day Sindh, Pakistan, is among the most significant archaeological sites associated with the early development of the Indus Valley Civilization (IVC). Located on the western bank of the Indus River in Dadu District, south of Mohenjo-daro, Amri provides crucial evidence for understanding the cultural transition from Pre-Harappan to Harappan civilization. Excavations at the site revealed a unique sequence of occupations, including the indigenous Amri culture, later interactions with Harappan traditions, and subsequent Jhukar and Jhangar cultural phases. The archaeological findings at Amri illuminate important developments in settlement organization, pottery production, subsistence patterns, architecture, trade networks, and socio-cultural interactions in ancient Sindh and neighboring Balochistan.

Introduction

Amri is one of the most important archaeological sites of the Indus Valley Civilization, dating back to approximately 3600 BCE. Located near the foothills of the Kirthar Mountains in Sindh, Pakistan, the site occupies a strategic geographical position between the Indus plains and the uplands of Balochistan. This location enabled cultural interaction and exchange between early agricultural communities and emerging urban centers.

The significance of Amri lies in its role as a type-site for the Amri culture, a distinctive Pre-Harappan cultural tradition that flourished during the fourth millennium BCE. Archaeological evidence demonstrates that Amri preserved a sequence of cultural developments ranging from indigenous settlements to full integration into the Mature Harappan civilization. Consequently, the site has become central to scholarly debates concerning the origins and evolution of urbanism in the Indus Valley.

Discovery and Archaeological Excavations

The archaeological significance of Amri was first recognized in 1929 through excavations conducted by archaeologist N. G. Majumdar. His

work revealed, for the first time, a Pre-Harappan settlement underlying a Harappan occupation layer. This discovery fundamentally altered prevailing understandings of the origins of the Indus Civilization, suggesting that Harappan urbanism evolved from earlier regional cultures rather than emerging suddenly.

However, Majumdar's excavations remained limited in scale, and his published findings offered only a preliminary understanding of the site. A more comprehensive archaeological investigation was later undertaken by French archaeologist Jean-Marie Casal and his colleagues between 1959 and 1962. Casal's extensive excavations established the cultural sequence of Amri and clarified the relationship between indigenous Pre-Harappan traditions and later Harappan influences.

The site itself consists of two major archaeological mounds, designated as Mound A in the east and Mound B in the west, spread over approximately eight hectares on the western bank of the Indus River.

Chronology and Occupational Periods

Excavations at Amri revealed a sequence of five occupational periods that document cultural

continuity and transformation over several millennia.

Period I: The Amrian Phase (c. 3600–3300 BCE)

The earliest phase of occupation at Amri belongs to the indigenous Amrian culture, representing a Pre-Harappan stage of development. During this period, the settlement consisted primarily of mud-brick structures, including small rectangular houses divided into rooms.

Archaeologists identified two major architectural forms during the later sub-phases (IC–ID). One consisted of large rectangular mud-brick houses with lateral entrances, while the other included compartmentalized storage-like structures resembling those discovered at Mehrgarh during the Kili Gul Mohammad phase.

Stone was also incorporated into construction, mainly for foundation purposes. Some evidence suggests the existence of defensive or enclosing walls, indicating increasing social organization and settlement planning.

Pottery and Material Culture of the Amrian Phase

Amri Phase pottery, commonly known as *Amri Ware*, constitutes one of the most distinctive aspects of the site's material culture. This pottery was primarily hand-made and characterized by red-buff fabrics. Vessel forms included hemispherical bowls, angular-sided bowls, S-shaped jars, and occasionally dish-on-stand vessels.

Decorative motifs were painted in black, brown, and red pigments upon cream or buff slips. Geometric designs predominated, especially checkerboard patterns, horizontal bands, and sigma motifs. In later phases, more elaborate decorations appeared, including intersecting circles, fish-scale motifs, zoomorphic imagery, and limited use of red slip.

Additional terracotta artifacts included:

- Beads
- Bangles
- Figurines of humped cattle
- Circular, square, and triangular terracotta cakes

Stone tools emphasized geometric microliths, while other artifacts included shell bangles, bone tools, steatite rods, rare carnelian beads, and copper blades.

The existence of highly developed ceramics suggests the presence of specialized craft production, although evidence for other professional specialization remains uncertain.

Period II: Transitional Phase (c. 2750–2450 BCE)

During Period II, archaeological evidence demonstrates increasing interaction between Amrian traditions and the expanding Harappan cultural sphere. Harappan material culture gradually appeared alongside indigenous forms rather than replacing them abruptly.

This phase suggests a period of cultural coexistence and interaction, indicating that the development of Indus Civilization in Sindh involved integration and exchange rather than complete cultural displacement.

Period III: Harappan Occupation (c. 2450–1900 BCE)

Period III belongs almost entirely to the Harappan civilization and contains evidence of Early, Transitional, and Mature Harappan phases. During this period, Amri became integrated into the broader urban and economic networks of the Indus Valley Civilization.

Archaeological remains demonstrate increasing standardization in material culture, reflecting broader Harappan social organization. Trade networks intensified, connecting Amri to distant regions for acquiring metals and semi-precious stones absent from the local environment.

Evidence suggests that despite Harappan dominance, elements of earlier regional traditions persisted at the site.

Period IV: Jhukar and Jhangar Cultural Influences (c. 1900–1300 BCE)

Following the decline of the Mature Harappan civilization, Amri entered a phase characterized by cultural hybridity. Jhukar cultural elements emerged alongside surviving Harappan traditions, demonstrating continuity rather than sudden abandonment.

Later, Jhangar cultural influences appeared, represented particularly by coarse grey pottery traditions.

Period V: Islamic Occupation

The final occupational layer at Amri belongs to the Islamic period and dates much later than the prehistoric settlement phases.

Settlement Patterns and Architecture

Settlement evidence from Amri suggests increasing social complexity over time. Archaeologist Walter Fairservis observed two major settlement types associated with the Amri cultural horizon:

1. **Dispersed settlements** consisting of isolated or clustered domestic structures
2. **Nucleated settlements** containing multiple buildings and possibly public architectural units

This diversity may reflect economic adaptation, particularly the significance of hunting and fishing alongside agriculture.

The architecture primarily utilized mud-brick construction, supplemented by stone foundations. Storage facilities and organized domestic layouts indicate increasing social coordination and economic planning.

Economy and Subsistence

The economy of Amri was based primarily upon domesticated plants and animals, particularly humped cattle (*Bos indicus*). However, archaeological evidence indicates that hunting

and fishing played a more substantial role than at many later Harappan settlements.

Jean-Marie Casal discovered significant remains of gazelle and other wild animals, indicating active hunting practices. Several Amri-associated settlements also reveal shell middens, suggesting exploitation of riverine and coastal resources.

This mixed economy likely contributed to the settlement diversity observed across the region.

Trade and Cultural Interaction

The geographical location of Amri positioned it as an intermediary settlement between Sindh and Balochistan. Since the surrounding region lacked abundant mineral resources and semi-precious stones, the presence of metals, shell ornaments, carnelian beads, and other exotic materials demonstrates participation in long-distance exchange networks.

Archaeological similarities between Amri, Kot Diji, Balakot, and Nal indicate extensive cultural interaction. Pottery styles overlap considerably, and scholars often refer to related ceramic traditions as *Amri-Nal Ware*.

The discovery of comparable script-like symbols across these sites suggests communication networks that extended beyond the exchange of commodities, potentially involving shared symbolic systems and cultural identities.

Urbanization and Historical Significance

Amri occupies a central position in understanding the emergence of urban civilization in South Asia. Evidence from the site suggests that Harappan civilization did not arise directly or exclusively from the Amri culture. Instead, both traditions coexisted and interacted over extended periods.

This challenges earlier models proposing a sudden replacement of regional societies by Harappan culture. Instead, archaeological evidence supports a gradual process of cultural synthesis, regional interaction, and urban development.

As one of the earliest fortified settlements in Lower Sindh, Amri represents a critical stage in the transition from village-based agricultural communities toward urban civilization.

Conclusion

Amri stands as one of the most important archaeological sites for understanding the origins

and evolution of the Indus Valley Civilization. From its early Amrian phase through Harappan integration and later Jhukar-Jhangar influences, the site preserves a remarkable cultural sequence spanning several millennia.

Its pottery traditions, architectural remains, subsistence strategies, and trade evidence demonstrate the complexity of Pre-Harappan societies and their role in shaping South Asia's first urban civilization. Far from being merely a precursor to Harappan culture, Amri illustrates a dynamic process of cultural coexistence, adaptation, and transformation.

Continued archaeological investigation of Amri remains essential for reconstructing the early history of Sindh and the broader development of civilization in the Indus Valley.

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Babar Kot

Introduction

The Indus Valley Civilization, one of the earliest urban civilizations of the ancient world, is globally recognized for its extensive geographical spread, urban planning, trade networks, agricultural systems, and social organization. This civilization was not confined merely to Sindh and Punjab; rather, its cultural and archaeological footprint extended across present-day Pakistan, northwestern India, Afghanistan, and parts of Iran. The Saurashtra region of Gujarat occupies a particularly significant place in the southern expansion of the Indus Civilization, where hundreds of Harappan sites have been identified. Among these, Babar Kot emerges as an important and noteworthy archaeological site.

Babar Kot, located near Rajula in the Amreli District of Gujarat, India, represents an important fortified rural settlement associated with the Late Harappan phase of the Indus Civilization. The site broadly dates between approximately 2500 BCE

and 1700 BCE and is regarded as one of the settlements in Saurashtra where cultural continuity persisted even after the decline of the major urban centers of the Indus Civilization.

This research article presents a detailed examination of the geographical, historical, archaeological, economic, social, and cultural significance of Babar Kot in order to better understand the later developmental phases of the Indus Civilization.

Geographical Background of Babar Kot

Babar Kot is situated in the Saurashtra Peninsula of Gujarat, India, within Jafarabad Taluka of Amreli District. The geographical coordinates of the site are approximately 21°48′ north latitude and 71°24′ east longitude. Archaeologically, the site survives as a mound covering approximately 2.66 hectares and rising nearly three meters in height.

The geographical location of Babar Kot is of considerable significance because it lies between important Harappan sites such as Rojdi, Rangpur, and the famous port city of Lothal. Consequently, the site is regarded as an integral component of the regional trade and cultural network of the Indus Civilization.

The semi-arid climate of Saurashtra, limited rainfall, and proximity to the Arabian Sea significantly influenced agriculture, pastoralism, and economic activities at Babar Kot. Owing to its nearness to the coast, the settlement may also have maintained indirect connections with maritime trade routes.

Historical and Cultural Context

Babar Kot belongs to the Late Harappan Phase of the Indus Civilization, approximately spanning from 2200 BCE to 1700 BCE. This period followed the gradual decline of the great urban centers of the civilization, such as Mohenjo-daro and Harappa.

During this phase, large urban settlements progressively weakened, while smaller rural, agricultural, and fortified communities gained increasing prominence. Babar Kot represents one such transformation, where instead of a major urban center, a relatively small but organized settlement developed.

The site is generally considered part of the Sorath Harappan Culture, a regional cultural manifestation in Gujarat that reflects the continuity of Harappan traditions alongside local cultural adaptations.

Discovery and Archaeological Excavations

To understand the significance of Babar Kot, it is essential to examine its archaeological investigations. Excavations at the site were conducted during 1990–1991 under the direction of the American archaeologist Gregory L. Possehl, in collaboration with the Indian archaeologist M. H. Raval.

The excavation project was funded by the National Science Foundation of the United States, with logistical and institutional support from the Gujarat State Department of Archaeology.

The principal objective of the excavations was to understand the social, economic, and settlement organization of Late Harappan communities in the Saurashtra region. Through a series of trenches, archaeologists uncovered residential floors, walls, pottery, tools, and botanical remains.

Fortifications and Defensive Structures

One of the most remarkable features of Babar Kot is its substantial fortification system. Excavations revealed defensive walls constructed from stone and a local clay mixture known as kali-mate, indicating that the settlement had been designed with defensive concerns in mind.

The western fortification wall measured approximately 4.5 meters in width, while the southern wall was nearly 3 meters wide. Archaeologists also discovered traces of bastion-like corner structures, suggesting a deliberate defensive strategy.

These fortifications indicate that during the Late Harappan period, the protection of resources, water, livestock, and local populations had become increasingly important, likely in response to social and environmental pressures.

Residential Structures and Settlement Organization

The residential layout of Babar Kot appears relatively simple yet systematically organized. Excavations uncovered stone walls aligned in north-south and east-west directions, indicating the presence of domestic architectural units.

Archaeologists discovered:

- Hearths
- Grinding stones for grain processing
- Storage vessels
- Pit-like depressions or storage pits
- Residential floors

These remains provide valuable insight into everyday life at the settlement.

Since no monumental administrative building, temple, or centralized public structure was discovered, scholars generally interpret Babar Kot as a modest rural settlement where agricultural and household activities formed the basis of community life.

Botanical Remains and Agriculture

Archaeobotanical evidence suggests that agriculture constituted a fundamental aspect of the economy at Babar Kot.

Recovered crops include:

- Pearl millet
- Finger millet (ragi)
- Foxtail millet
- Little millet
- Chickpeas and other legumes

These crops were particularly suitable for cultivation in semi-arid environments, indicating that the inhabitants had adapted their agricultural practices to local ecological conditions.

Researchers suggest the existence of a dual seasonal agricultural system:

1. **Kharif (summer) crops** – especially millet varieties
2. **Rabi (winter) crops** – including pulses and legumes

Such agricultural diversification contributed significantly to food security and settlement sustainability.

Faunal Remains and Pastoralism

Animal remains recovered from Babar Kot indicate that pastoralism played a central role in the local economy.

Domesticated animals included:

- Humped cattle (*Bos indicus*)
- Goats
- Sheep
- Pigs
- Water buffaloes
- Dogs

Wild animals identified include:

- Deer

- Blackbuck
- Nilgai
- Wild boar
- Certain reptilian species

This evidence demonstrates the presence of a mixed **agro-pastoral economy**, in which agriculture was combined with livestock herding and limited hunting activities.

Pottery, Tools, and Material Culture

A considerable quantity of pottery has been recovered from Babar Kot, showing strong similarities to the **Rojdi C Phase** ceramic tradition.

Important pottery forms include:

- Red ware vessels
- Large storage jars
- Cooking pots
- Fine clay bowls

In addition, archaeologists recovered:

- Microlithic stone tools
- Grinding stones
- Beads
- Bangles
- Metal fragments

These findings suggest the presence of limited craft production, domestic industries, and household-level manufacturing activities.

The Importance of Babar Kot in the Indus Civilization

Babar Kot is particularly important for understanding the final stages of the Indus Civilization. The site demonstrates that following the decline of major urban centers such as Mohenjo-daro, Harappan culture did not disappear entirely; rather, it survived through smaller regional settlements.

The site is particularly important for understanding:

1. **Cultural continuity after urban decline**
2. **The survival of Harappan society in Saurashtra**
3. **The evolution of agro-pastoral economies**
4. **Regional trade and settlement networks**
5. **The social organization of fortified rural communities**

Scholarly Interpretations and Modern Perspectives

Modern scholars increasingly argue that sites such as Babar Kot represent not the “collapse” of the Indus Civilization but rather its “transformation.” In this interpretation, the civilization did not vanish abruptly but gradually shifted from large urban centers to smaller rural settlements.

Accordingly, sites such as Babar Kot, Rojdi, and Oriyo Timbo demonstrate that Gujarat remained an important center for the persistence of Harappan cultural traditions during the civilization’s later phases.

Conclusion

Babar Kot stands as an important archaeological site of the Indus Civilization that not only illuminates the regional history of Gujarat but also contributes significantly to our understanding of the social, economic, and cultural transformations during the final stages of the Indus Civilization. Evidence from the site suggests that the decline of the Indus Civilization did not constitute a complete collapse, but rather a gradual transformation characterized by the persistence of fortified settlements, agricultural economies, and localized cultural traditions.

Future excavations and advanced scientific methods—such as DNA analysis, isotope studies,

and paleoenvironmental research—may further deepen our understanding of the later phases of the Indus Civilization and reveal new dimensions of Babar Kot's historical significance.

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Bachani

Abstract

The archaeological landscape of Sindh contains numerous sites that document the development of human societies from early village communities to the urban settlements of the Indus Valley Civilization. Among these sites is Bachani, located in the Baran Valley region of Dadu District. Archaeological evidence from the site, including pottery associated with the urban phase of the Indus Civilization and architectural remains constructed from stone and mud mortar, indicates its significance as a settlement connected with the broader cultural traditions of the Bronze Age. This article examines the geographical setting, archaeological remains, and historical importance of the Bachani site.

Introduction

Sindh occupies a prominent position in the archaeological history of South Asia owing to its

rich concentration of prehistoric and protohistoric settlements. The Baran Valley and adjacent regions of Dadu District contain numerous archaeological sites that illustrate different stages of cultural development. Bachani is one such site that provides evidence of occupation during the urban phase of the Indus Valley Civilization. The material remains discovered at the site contribute to understanding settlement patterns, architectural practices, and cultural interactions within the wider Indus cultural sphere.

Geographical Setting

The Bachani archaeological site is situated northeast of Bachani village on the western side of the Baran Nai in Dadu District, Sindh. The site lies within a region characterized by seasonal streams, foothill environments, and natural routes connecting the Kirthar uplands with the Indus plains. These geographical features likely facilitated communication, trade, and human settlement throughout antiquity.

Archaeological Remains

Archaeological surveys have revealed that the site is covered with scattered stones and pottery sherds. The pottery recovered from Bachani has been identified as belonging to the urban phase of

the Indus Valley Civilization, suggesting cultural links with the mature urban centers that flourished across Sindh and adjoining regions during the Bronze Age.

The principal archaeological features identified at the site include:

- Pottery associated with the urban civilization phase.
- Extensive scatters of potsherds.
- Stone remains distributed across the settlement area.
- Architectural evidence indicating the use of stone and mud mortar in construction.

The presence of these remains suggests a permanent settlement where inhabitants employed durable building materials and participated in the technological and cultural traditions characteristic of the Indus Civilization.

Architectural Characteristics

One of the notable features of Bachani is the evidence that its structures were built using stone bonded with mud mortar. This construction technique reflects adaptation to the local environment, where stone was readily available. Such architectural practices are observed at

several archaeological sites located in the Kirthar region and western Sindh, where local resources influenced building traditions.

The use of stone foundations and mud mortar would have enhanced the durability of residential and communal structures while remaining economically efficient for the inhabitants.

Cultural and Historical Significance

The discovery of urban-phase pottery at Bachani indicates that the settlement was integrated into the broader cultural network of the Indus Valley Civilization. Pottery styles, manufacturing techniques, and settlement organization provide important evidence for understanding the spread of cultural traditions beyond major urban centers such as Indus Valley Civilization.

Bachani demonstrates that the urban civilization of Sindh was not confined solely to large cities but also extended to smaller settlements that played important roles in regional economic and social systems. These settlements likely contributed to agricultural production, resource extraction, local trade, and communication between highland and lowland communities.

Conclusion

The archaeological site of Bachani represents an important component of the cultural heritage of Sindh. The discovery of pottery belonging to the urban phase of the Indus Civilization, together with architectural remains constructed from stone and mud mortar, indicates that the site was a permanent and organized settlement. Bachani contributes valuable information regarding settlement patterns and architectural traditions in western Sindh during the Bronze Age. Further archaeological investigations may reveal additional evidence concerning the chronology, economy, and cultural affiliations of this significant site.

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Balu

Introduction

The Indus Valley Civilization (IVC), also known as the Harappan Civilization, is regarded as one of the world's earliest and most sophisticated urban civilizations. Flourishing approximately between 3300 BCE and 1300 BCE, the civilization reached its peak during the Mature Harappan Phase (c. 2600–1900 BCE). Hundreds of archaeological sites associated with this civilization have been discovered across present-day Pakistan and India. While several of these sites developed into large urban centers, others functioned as smaller rural and agricultural settlements. Among such significant yet relatively lesser-known sites is **Balu**, located in the modern Indian state of Haryana.

The archaeological site of Balu holds exceptional significance due to its agricultural evidence, food remains, botanical discoveries, and especially the earliest known evidence of **garlic cultivation and use** in South and Southeast Asia. The site offers valuable insights into the daily life, agrarian

economy, dietary practices, and rural organization of the Indus Valley Civilization.

Geographical Location

Balu is situated in the Kaithal district of the Indian state of Haryana, approximately 22 kilometers south of the city of Kaithal. The region has historically been agriculturally fertile due to its association with ancient river systems and productive alluvial plains.

In antiquity, Haryana and the broader Ghaggar-Hakra river region played a vital role in Harappan settlement patterns. Consequently, smaller settlements like Balu likely served not only as agricultural hubs but also contributed to supplying food resources to larger urban centers such as Harappa and Mohenjo-daro.

Archaeological Discovery and Excavations

Balu was identified as a Harappan site through archaeological surveys and excavations conducted in the region. Excavation findings indicate that it was a **small fortified settlement**, associated primarily with the Mature Harappan phase of the Indus Valley Civilization.

Architectural remains discovered at the site suggest that the inhabitants employed defensive measures to safeguard the settlement. The presence of fortification implies a degree of social organization and concern for the protection of resources and community life.

Excavations at Balu uncovered structural remains, pottery, possible storage areas for grains, domestic artifacts, and botanical remains, all of which provide important evidence regarding the economic and cultural life of the settlement.

Relationship with the Indus Valley Civilization

Balu is considered one of the smaller rural settlements integrated into the wider cultural, economic, and trade network of the Indus Valley Civilization.

The pottery styles, agricultural remains, and settlement planning at Balu closely resemble typical Harappan characteristics. Although Balu was not a major urban center like Harappa or Mohenjo-daro, its existence demonstrates that the Indus Civilization was not composed solely of large cities but also included an extensive network of villages and agricultural communities.

This site reinforces the argument that the Harappan economy was sustained not merely through trade and craft specialization but also through a strong and organized agricultural base.

Agricultural Economy and Botanical Evidence

One of the most significant aspects of Balu is the discovery of extensive **plant remains**, which have provided valuable information about the agricultural practices of the Harappan people.

According to research conducted by **Saraswat and Pokharia**, several cultivated crops and plant remains were discovered at Balu, including:

- Barley
- Wheat
- Rice
- Horsegram
- Green gram (mung bean)
- Various species of peas
- Sesame
- Melon
- Watermelon
- Grapes
- Dates
- Garlic

These botanical remains demonstrate that the inhabitants of Balu practiced a **diversified agricultural system**, involving cereals, legumes, vegetables, fruits, and oilseed crops.

The presence of rice is particularly noteworthy, as it suggests regional agricultural diversity within the Indus Civilization. Rice cultivation generally requires wetter environmental conditions, indicating ecological adaptation and agricultural sophistication.

The Earliest Evidence of Garlic: Archaeological Importance

Among the most remarkable discoveries at Balu is a specimen of **garlic (Allium sativum)**, recognized by archaeologists as the **earliest known evidence of garlic use in South and Southeast Asia**.

This evidence dates to the **Mature Harappan period (c. 2600–1900 BCE)** and has profound implications for understanding the dietary and medicinal practices of ancient Harappan communities.

The presence of garlic raises several important interpretations:

1. Dietary Culture

The evidence suggests that the people of the Indus Civilization possessed a developed culinary tradition and an understanding of flavoring agents in food preparation.

2. Medicinal Knowledge

Garlic has long been valued in ancient societies for its medicinal properties. It is plausible that the Harappans also used garlic for therapeutic or preventive healthcare purposes.

3. Agricultural Expertise

Garlic cultivation requires specialized agricultural knowledge, seasonal management, and environmental understanding. Its presence at Balu reflects the advanced agricultural capabilities of the Harappan people.

Comparative Study with Nearby Harappan Sites

Balu is frequently compared with the nearby Harappan site of **Kunal**, also located in Haryana.

Excavations at Kunal revealed evidence of rice remains, possibly representing wild rice varieties. Comparative studies between Balu and Kunal indicate that the Haryana region was an important

center of agricultural diversity within the Harappan cultural sphere.

The botanical evidence from both settlements demonstrates the crucial role of agriculture in sustaining Harappan society and its regional adaptability.

Social and Cultural Life

Despite its relatively small size, archaeological evidence suggests that Balu had an organized social structure.

Its inhabitants were likely involved in:

- Agriculture
- Animal husbandry
- Local trade networks
- Collective social organization

Such smaller settlements likely played an essential supporting role within the broader urban framework of the Indus Civilization.

Historical and Archaeological Significance

The site of Balu is important for several reasons:

1. It represents one of the smaller fortified rural settlements of the Indus Valley Civilization.
2. Its botanical remains provide crucial evidence regarding Harappan agricultural practices.
3. The earliest known garlic evidence elevates Balu's importance in South Asian archaeology.
4. The site contributes significantly to understanding Harappan food culture and ecological adaptation.
5. Balu offers valuable insights into the rural foundations of the Indus Civilization.

Conclusion

Although relatively small in size, the archaeological site of Balu in Haryana possesses immense historical and academic importance. It provides critical evidence concerning the agricultural economy, food culture, botanical diversity, and social organization of the Indus Valley Civilization.

Most importantly, the discovery of the earliest known garlic remains grants Balu a unique position in South Asian archaeological scholarship. Furthermore, the site highlights that the strength of the Indus Civilization rested not only in its great

cities but also in its smaller agricultural settlements, which formed the backbone of its economic and social system.

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Banawali

Introduction

The Indus Valley Civilization (IVC) is regarded as one of the world's oldest urban civilizations, flourishing approximately between 3300 BCE and 1300 BCE across the northwestern regions of the Indian subcontinent. Major archaeological sites of this civilization are located in present-day Pakistan and India, including Mohenjo-daro, Harappa, Kot Diji, Kalibangan, Rakhigarhi, Dholavira, and Banawali. The archaeological remains discovered at these sites provide significant information regarding human civilization, urban planning, trade, craftsmanship, and religious tendencies.

Banawali is one of the significant archaeological sites of the Indus Valley Civilization, situated in the Fatehabad district of Haryana, India. This site is important not only because of its urban planning, fortifications, and residential architecture, but also because it serves as an essential source for understanding the

developmental stages of the civilization, including the Pre-Harappan and Mature Harappan periods.

Geographical Location and Setting

Banawali is located in the Fatehabad district of Haryana and lies approximately 16 kilometers from Fatehabad city. The site is situated about 120 kilometers northeast of Kalibangan. According to archaeologists, Banawali was established on the left bank of the now dried-up Sarasvati River (Ghaggar-Hakra).

From a geographical perspective, Banawali occupied a highly strategic location because it lay within a region connected to the agricultural and trade networks of the Indus Civilization. Whereas Kalibangan was situated in the lower middle valley of the Sarasvati River, Banawali was constructed in the upper middle valley, highlighting its regional significance.

History of Excavation

Systematic archaeological excavations at Banawali were undertaken in 1974 under the supervision of archaeologist R. S. Bisht of the Archaeological Survey of India (ASI). The excavations revealed that Banawali passed through several cultural phases, including the Pre-Harappan, Transitional

Harappan, Mature Harappan, and Post-Harappan periods.

The excavations demonstrated that Banawali was a site where an advanced fortified Harappan town was constructed over an earlier proto-urban settlement. This finding provides important evidence regarding the urban evolution of the Indus Civilization.

Cultural Phases and Historical Sequence

1. Period I: Pre-Harappan Phase (c. 2500–2300 BCE)

The earliest settlement at Banawali belongs to the Pre-Harappan period and closely resembles the Kalibangan-I cultural tradition. This phase has been divided into three sub-phases:

- Pre-defence Phase
- Defence Phase
- Transitional or Proto-Harappan Phase

During this period, houses were constructed using kiln-fired and molded bricks. Pottery, including jars, vases, and domestic vessels, has been discovered and shows strong similarities with the early pottery tradition of Kalibangan.

This period suggests the existence of early forms of urban life at Banawali, which later evolved into a fully developed Harappan urban center.

2. Period II: Mature Harappan Phase (c. 2300–1700 BCE)

This was the peak period of Banawali. During this phase, a highly organized and fortified urban settlement emerged. The city was planned in a chessboard-like grid pattern, similar to other major Harappan cities such as Mohenjo-daro and Harappa.

The settlement extended over an area measuring approximately 200 × 500 meters. Excavations uncovered a defensive wall measuring around 105 meters in length, 4.5 meters in height, and 6 meters in width, which may also have served as protection against flooding.

Urban Planning

The city planning of Banawali demonstrates the advanced urban thinking of the Indus Civilization. Streets were oriented north-south and intersected by east-west lanes, reflecting a highly organized municipal structure. This arrangement may be regarded as an early example of sophisticated urban management.

The city was divided into two distinct sections:

1. The Acropolis or elite/ruling-class area
2. The residential area of the common population (Lower Town)

This division suggests the existence of social stratification within Harappan society.

Residential Architecture and Housing System

The houses at Banawali were carefully planned and systematically constructed. They included:

- Multiple rooms
- Kitchens
- Bathrooms and toilets
- Storage areas or strong rooms

Several houses yielded seals, weights, and ornament-making materials, indicating the presence of trade and craftsmanship.

A large house produced gold beads, lapis lazuli, carnelian, delicate weights, and a touchstone bearing traces of gold, suggesting that the residence may have belonged to a jeweler or goldsmith.

Religious and Ritualistic Practices

Several houses at Banawali contained fire altars, which are believed to have been associated with religious or ritualistic activities. Similar structures have also been found at Kalibangan, indicating that organized ritual practices existed within the Indus Civilization.

Artefacts Recovered

The artefacts discovered at Banawali provide substantial evidence regarding the artistic, commercial, and cultural advancement of the Indus Civilization.

Pottery

Excavations yielded:

- S-shaped jars
- Cooking vessels
- Ovens and tandoors
- Painted pottery

These vessels were decorated with motifs of peacocks, deer, fish, flowers, pipal leaves, stars, honeycomb designs, and checkerboard patterns.

Seals

Harappan seals recovered from Banawali depict:

- Rhinoceros
- Wild goat
- Ibex
- Unicorn-like animal
- Composite animal with a tiger’s body

These seals were likely used for trade, administration, or ownership purposes.

Metals and Ornaments

Excavations uncovered:

- Gold
- Copper
- Bronze
- Silver
- Lapis lazuli
- Shell bangles

These findings reflect the development of local craftsmanship and trade networks.

Trade Relations

The discovery of marine shells at Banawali is particularly significant because the site is located far from the sea. This suggests the existence of strong internal trade networks within the Indus Civilization.

It is also possible that Banawali maintained commercial links with coastal trading centers in Gujarat.

Important Discoveries

During excavations conducted in 1987–88, two particularly important discoveries were made:

1. Decorated Grey Ware Vessel

A burnished grey vessel decorated with two bovine motifs was found. These motifs closely resemble those seen on Pre-Harappan pottery from Kot Diji and Kalibangan.

2. Unbaked Clay Animal Figurine

An unbaked clay figurine featuring deep crisscross incisions on its back and neck was discovered. Some scholars believe that it resembles a horse due to the appearance of a saddle and mane. If this interpretation is correct, it may contribute significantly to discussions regarding the early presence of horses in South Asia.

Causes of Decline

Evidence from Banawali and Kalibangan suggests that urban life at both sites ended rather abruptly.

Scholars propose several possible reasons for this decline:

- Changes in the course of the Sarasvati/Ghaggar River
- Severe flooding
- Climatic changes
- Agricultural crises
- Breakdown of trade networks

The evidence of water damage on the fortification walls suggests that flooding may have severely affected the settlement.

Archaeological Importance of Banawali

Banawali occupies a highly significant position in the study of the Indus Civilization because:

1. It provides evidence of continuous cultural development from the Pre-Harappan to the Mature Harappan period.
2. Its carefully planned urban layout demonstrates the advanced city planning of the Indus Civilization.
3. Fire altars and ritual structures provide insights into religious and ceremonial life.
4. Seals, weights, and ornaments indicate a flourishing economic and commercial system.

5. The discovery of marine shells demonstrates interregional trade connections.

Conclusion

Banawali is an extremely important archaeological site of the Indus Valley Civilization, serving not only as an advanced urban center but also as a crucial source for understanding the developmental phases of Harappan civilization. The fortification walls, planned streets, residential architecture, seals, ornaments, religious structures, and trade evidence discovered at the site collectively demonstrate that the Indus Civilization was highly organized, technologically advanced, and connected through extensive regional networks.

The archaeological materials recovered from Banawali continue to play a fundamental role in scholarly research concerning the social, economic, religious, and urban life of the Indus Civilization. The site stands not only as a symbol of historical greatness but also as a testimony to one of humanity's earliest experiments in urban civilization.

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Bandhani

Abstract

Dadu District occupies an important place in the archaeological heritage of Sindh due to the presence of numerous ancient sites representing different cultural periods. Among these is the archaeological site of Bandhani, located approximately three kilometers north of the present-day village of Bandhani. The site is associated with the urban phase of the Indus Valley Civilization. The presence of a natural spring near the site, along with stone-built architectural remains, suggests that it was a permanent and organized settlement. This article examines the geographical setting, archaeological evidence, architectural characteristics, and historical significance of the Bandhani site.

Introduction

The Indus Valley Civilization is one of the world's earliest urban civilizations, and its remains are widely distributed throughout Sindh. The arid and

foothill regions of Dadu District contain numerous archaeological sites that demonstrate the geographical extent and influence of this civilization. Bandhani is one such site, where archaeological remains indicate occupation during the urban phase of the Indus Civilization and provide valuable information regarding regional settlement patterns.

Geographical Setting

The archaeological site of Bandhani is situated approximately three kilometers north of the modern village of Bandhani in Dadu District, Sindh. A natural spring flows near the site, which would have served as an important source of water for ancient inhabitants. Reliable access to water is a fundamental requirement for human settlement, making the spring a significant factor in the establishment and sustainability of the community.

The site's location also suggests that its inhabitants effectively utilized local natural resources and adapted to the surrounding environment.

Archaeological Evidence

The archaeological remains discovered at Bandhani indicate that the site belonged to the urban phase of the Indus Valley Civilization. Surveys have revealed evidence of stone-built structures, reflecting a developed architectural tradition and an organized settlement pattern.

The principal archaeological features include:

- Remains associated with the urban phase of the Indus Civilization
- Stone-built architectural structures
- The remains of a substantial building
- Evidence of settlement in proximity to a natural spring

These findings demonstrate that Bandhani was not merely a temporary encampment but rather a permanent settlement with established architectural and social organization.

Investigations by N. G. Majumdar

The renowned archaeologist Nani Gopal Majumdar examined the Bandhani site during his extensive archaeological surveys in Sindh. He identified the remains of a building at the site, a discovery that highlights its archaeological importance.

The presence of a substantial structure suggests the existence of permanent residential, administrative, or communal facilities. Similar architectural remains have been documented at other settlements associated with the Indus Valley Civilization, reflecting shared traditions of planning and construction.

Architectural Characteristics

One of the most notable features of Bandhani is its stone-built architecture. The use of stone as a construction material indicates adaptation to local environmental conditions and the availability of suitable building resources. Stone structures are generally durable and require considerable technical knowledge and coordinated labor for their construction.

The architectural tradition observed at Bandhani resembles that found at several other archaeological sites located in western Sindh and the foothills of the Kirthar Range, suggesting broader regional cultural connections.

Cultural and Historical Significance

Bandhani is an important site for understanding the regional expansion of the Indus Valley Civilization. The combination of a nearby water

source, stone architecture, and substantial building remains indicates a socially and economically organized community.

The site demonstrates that the influence of the Indus Civilization extended beyond major urban centers and included smaller settlements that formed part of a wider cultural and economic network. Such communities likely played significant roles in agricultural production, local trade, resource management, and communication between different regions.

Conclusion

Bandhani is an important archaeological site in Dadu District associated with the urban phase of the Indus Valley Civilization. The nearby spring, stone-built structures, and building remains documented by Majumdar underscore the significance of the settlement. The site contributes valuable evidence for understanding ancient urban culture, architectural traditions, and regional settlement patterns in Sindh. Future excavations and scientific investigations may provide further insights into its chronology, economy, and cultural affiliations.

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Bargaon

Introduction

The Indus Valley Civilization (IVC) is one of the earliest urban civilizations in human history, flourishing approximately between 2600 BCE and 1900 BCE. Scholarly attention has largely focused on major urban centers such as Mohenjo-daro, Harappa, Dholavira, Lothal, and Rakhigarhi; however, smaller rural settlements are equally significant for understanding the final phases of the civilization. One such important archaeological site is **Bargaon**, located in the Saharanpur District of Uttar Pradesh, India.

Bargaon represents a **Late Harappan** settlement and occupies an important place in understanding the eastern expansion of the Indus Civilization, the emergence of rural communities, and the socio-cultural transformations that followed the decline of urban Harappan centers. Situated within the Ganga–Yamuna Doab region, the site helps define the eastern limits of Harappan influence while illustrating how urban populations gradually

transitioned into smaller agrarian settlements following the collapse of major cities.

Geographical Setting and Natural Environment

Bargaon is located in the Nakur tehsil of Saharanpur District in the Indian state of Uttar Pradesh, approximately 18–24 kilometers north of Saharanpur city. The archaeological mound lies on the left bank of the **Maskara River**, a tributary of the Yamuna River.

The site is situated at approximately **30°04′ N latitude and 77°34′ E longitude**, within the fertile alluvial plains of the **Upper Ganga–Yamuna Doab**, a region historically known for agricultural productivity. The fertile soil, seasonal river systems, and monsoon climate provided favorable environmental conditions for ancient habitation.

The doab landscape consists largely of **Bhangar** and **Khadar** alluvial formations, deposited by Himalayan rivers over millennia. Such fertile lands supported crops including rice, wheat, barley, and millets, thereby sustaining agricultural communities.

Environmentally, the region experienced a **semi-arid to subtropical climate**, with annual rainfall ranging between 50 and 140 centimeters. Strong monsoon systems during earlier periods ensured perennial river flow; however, after approximately 2000 BCE, weakening monsoons likely affected water availability and agricultural productivity, influencing Late Harappan settlement patterns.

Discovery and Archaeological Research

Bargaon was identified as an archaeological site during surveys conducted by the **Archaeological Survey of India (ASI)** in the 1960s. Interest in the region intensified following the discovery of Harappan remains at **Alamgirpur**, which suggested that the eastern extent of the Indus Civilization stretched much farther than previously assumed.

Between **1962 and 1965**, systematic village-to-village surveys were undertaken in Saharanpur District, leading to the discovery of more than **70 Late Harappan sites** distributed along tributaries of the Yamuna River, especially the **Krishni** and **Hindon** rivers.

Excavations at Bargaon were conducted in **1963–64** under the supervision of **M. N. Deshpande**, assisted by **K. N. Dikshit** and **Shankar Nath**.

Archaeological excavations revealed an occupational deposit approximately **1 to 1.5 meters thick**, indicating prolonged but low-intensity habitation.

One of the most striking findings was the absence of monumental architecture. No fortifications, large buildings, roads, drainage systems, or administrative structures were uncovered, suggesting that Bargaon functioned as a **small rural Harappan settlement rather than an urban center**.

The Late Harappan Period and Cultural Phases

Bargaon is generally associated with the **Late Harappan phase (ca. 1900–1300 BCE)**, a period characterized by the decline of urban Harappan civilization and increasing regionalization.

This era witnessed several major transformations:

- The collapse of major urban centers
- Decline in long-distance trade networks

- Reduction in standardized brick architecture
- Expansion of small agrarian villages
- Increased interaction with local cultures

Although Bargaon retained several traditional Harappan features, the level of craftsmanship appears less sophisticated than during the Mature Harappan phase. Standardized weights, seals, writing, and large civic architecture—hallmarks of classical Harappan urbanism—are absent. Pottery and artifacts instead display localized adaptations.

This reflects the broader processes of **deurbanization** and **ruralization**, through which former urban populations reorganized into smaller village-based societies.

Relationship with the Ochre Coloured Pottery Culture

One of Bargaon's greatest archaeological significances lies in its association with the **Ochre Coloured Pottery (OCP) Culture**.

Ochre Coloured Pottery Culture represents a regional Chalcolithic tradition of the Ganga–Yamuna Doab, flourishing approximately between **2000 and 1500 BCE**.

Excavations at Bargaon uncovered:

- Harappan Red Ware pottery
- Ochre Coloured Pottery
- Hybrid ceramic forms

The coexistence of these ceramic traditions indicates substantial interaction between Late Harappan communities and indigenous populations.

Researchers suggest that these interactions may have involved:

- Trade relationships
- Intermarriage
- Shared craftsmanship
- Agricultural cooperation

Such evidence points toward cultural integration rather than abrupt replacement.

Pottery and Ceramic Assemblages

Pottery constitutes the most significant category of material culture recovered from Bargaon and serves as the principal indicator of its Late Harappan identity.

The excavation yielded several ceramic forms, including:

- Dishes-on-stands
- Indus-style goblets
- Ring stands
- Miniature pedestal cups
- Long-necked vessels
- Narrow- and wide-rimmed jars

Decorative motifs included:

- Wavy lines
- Oblique and horizontal incisions
- Chevron patterns
- Cross-hatched triangles
- Comb-made impressions

These artistic traditions demonstrate continuity with classical Harappan ceramic aesthetics, although craftsmanship appears simplified when compared with urban centers.

Metal, Stone, and Terracotta Artifacts

Excavations also yielded a limited but important assemblage of metal, lithic, and terracotta objects.

Copper Objects

- Copper rings
- Copper fragments
- A fragmentary copper celt

Stone Tools

- Chert blades
- Stone weights
- Grinding stones (querns)

Terracotta Objects

- Bull-headed toy carts
- Wheels with central hubs
- Round and elongated cakes
- Bangles
- Miscellaneous clay objects

Particularly noteworthy are the **faience bangles**, which indicate continuity in Harappan craftsmanship and technological traditions despite broader cultural transitions.

Settlement Pattern and Residential Structure

No major architectural remains were discovered at Bargaon. There were no fortifications,

defensive walls, organized street systems, or public structures.

This suggests:

1. A relatively small population
2. An economy primarily dependent on agriculture
3. Residential structures likely made of mud and timber, which may not have survived due to erosion and environmental degradation

As such, Bargaon is highly significant for understanding the **village phase of the Indus Civilization**.

Bargaon and the Eastern Expansion of the Indus Civilization

Bargaon represents one of the important easternmost extensions of Harappan influence.

The site demonstrates that:

- The Indus Civilization was not restricted to Sindh and Punjab alone;

- Its cultural influence extended deep into present-day Uttar Pradesh;
- Harappan populations migrated along river systems;
- Following urban decline, new agricultural settlements emerged.

Bargaon is often studied alongside nearby Late Harappan sites such as Alamgirpur and Hulas, both of which help define the eastern boundary of Harappan cultural expansion.

Environmental Change and the Decline of Civilization

Archaeological and paleoenvironmental studies suggest that after approximately **2000 BCE**, weakening monsoon systems affected river dynamics and agricultural productivity.

These environmental changes resulted in:

- Altered river courses
- Reduced flood reliability
- Agricultural instability
- Weakening of urban centers

Such pressures contributed to the transformation of Harappan society from large urban centers into dispersed rural communities.

Bargaon stands as a compelling example of this transition, where adaptation and survival replaced the monumental urbanism of earlier centuries.

Conclusion

Bargaon is an important archaeological site of the Late Harappan period that contributes significantly to our understanding of the decline, ruralization, and cultural transformation of the Indus Valley Civilization. Although it lacks the monumental architecture of sites such as Mohenjo-daro or Harappa, its significance lies in demonstrating the transition from urban civilization to agrarian village society.

The coexistence of Harappan and Ochre Coloured Pottery traditions, evidence of interaction with indigenous communities, and its modest rural character collectively make Bargaon an essential site for understanding the final stages of the Indus Civilization. Future excavations and scientific dating methods, particularly radiocarbon analysis,

may further clarify the chronology and historical importance of this settlement.

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Bannu

Introduction

Recent archaeological discoveries in the **Bannu** region have contributed significantly to our understanding of prehistoric cultures in northwestern Pakistan. Approximately 13 miles south of Bannu, in the **Tochi Valley**, archaeologists have identified ancient remains that provide important evidence of pre-urban settlement patterns. These discoveries shed light on the rural cultures that flourished before the emergence of the urban centers of the **Indus Valley Civilization**.

Discovery and Location

Two archaeological mounds discovered in the Tochi Valley have been identified as belonging to the **Kot Diji Culture**. The sites are situated on the left bank of the Tochi River and were identified by archaeologists from the Department of Archaeology at **University of Peshawar**.

The strategic location of these settlements along an important river valley suggests that they formed part of a network of prehistoric communities that occupied the frontier regions between the Indus plains and the highlands of present-day Khyber Pakhtunkhwa and Afghanistan.

Archaeological Findings

Excavations conducted at the two mounds have yielded a variety of artifacts characteristic of the Kot Diji cultural tradition. Among the discoveries are pottery bangles, stone blades, and other utilitarian objects. These artifacts indicate that the settlement belonged to communities that were successors to the rural cultural traditions of the Indus Valley region.

The material culture recovered from the site demonstrates technological and cultural connections with other Early Harappan settlements. The pottery styles, stone tools, and domestic artifacts suggest a well-established community with developed craft traditions.

Relationship with the Gomal Valley Culture

A notable feature of the Bannu discoveries is their similarity to artifacts recovered from

archaeological sites in the **Gomal Valley**. The resemblance between the material remains from these regions indicates cultural interaction and possibly shared economic and social traditions among prehistoric communities inhabiting northwestern Pakistan.

These similarities support the view that the Bannu and Gomal regions were part of a broader cultural sphere during the Early Harappan period. Such connections may have facilitated the exchange of goods, ideas, and technologies that eventually contributed to the development of urban civilization in the Indus Valley.

Economic Life

Archaeological evidence suggests that the settlement was primarily agricultural in nature. The inhabitants appear to have practiced farming while also maintaining domesticated animals. This mixed agro-pastoral economy was typical of many pre-Harappan communities and provided the economic foundation for later urban development.

The fertile riverine environment of the Tochi Valley would have supported crop cultivation and livestock husbandry, enabling the community to sustain a relatively stable population.

Historical Significance

The discovery of these sites is particularly important because it provides valuable information about the rural cultural traditions that preceded the rise of urban civilization in the Indus region. The Bannu mounds offer evidence for the gradual evolution of social and economic systems that later culminated in the emergence of the mature Harappan Civilization.

Further archaeological investigations at these sites may yield additional data regarding settlement organization, subsistence practices, trade networks, and cultural development during the prehistoric period. Such research has the potential to enhance our understanding of South Asia's prehistory and the origins of one of the world's earliest urban civilizations.

Conclusion

The archaeological sites discovered in the Tochi Valley near Bannu represent significant evidence of the Kot Diji cultural tradition and the rural foundations of the Indus Valley Civilization. Their material remains demonstrate strong connections with contemporary communities in the Gomal Valley and highlight the importance of agriculture and pastoralism in prehistoric northwestern

Pakistan. Continued research at these sites promises to deepen our knowledge of the transition from rural village life to urban civilization in the greater Indus region.

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Baror

Introduction

Baror is an important archaeological site associated with the Indus Valley Civilization, located in the Sri Ganganagar district of Rajasthan, India. The site represents a settlement linked with both the Pre-Harappan and Harappan phases of the civilization. The significance of Baror lies in the archaeological evidence uncovered during excavations, which provides important insights into the cultural continuity, urban planning, craftsmanship, social organization, and trade networks of the Indus Valley Civilization.

Baror not only demonstrates the eastern expansion of the Indus Civilization but also confirms that Harappan cultural influence was not limited to Sindh and Punjab; rather, it extended into the arid regions of Rajasthan as well.

Geographical Location and Environmental Background

Baror is situated in the northern part of Rajasthan, within Sri Ganganagar district, an area historically associated with ancient river systems and seasonal water channels. Scholars suggest that, like many settlements of the Indus Civilization, the establishment of Baror was closely connected to water availability, agricultural resources, and trade routes.

The region may once have been located near the ancient Hakra/Ghaggar-Sarasvati river system, along whose banks many settlements of the Indus Civilization flourished. Such an environmental setting made Baror suitable for agriculture, pastoral activities, and commercial exchange.

Discovery and Archaeological Identification

Baror was first identified during 1916–1917 by the Italian scholar and archaeologist Luigi Pio Tessitori, who recognized the significance of the site during surveys of ancient cultural remains in Sindh and northern India. Tessitori's work played a foundational role in the identification of new settlements linked to the Indus Valley Civilization.

After the independence of India, Amalananda Ghosh conducted a detailed survey of Baror, further clarifying its archaeological significance.

Later, between 2003 and 2006, systematic excavations were conducted under the “Sarasvati Heritage Project” by the Archaeological Survey of India. The excavations were directed by archaeologists Urmila Sant and T.J. Baidya. Approximately 400 × 300 meters of area were excavated, leading to discoveries that placed Baror among the significant sites of the Indus Civilization.

Cultural Sequence: The Developmental Phases of Baror

Archaeological excavations at Baror revealed a three-fold cultural sequence, demonstrating a long continuity of human settlement.

1. Pre-Harappan Period

The earliest occupational layer at Baror belongs to the Pre-Harappan phase. During this period, ceramics were manufactured on the potter’s wheel. The pottery was red in color and devoid of painted decoration.

The pottery fabric was coarse to medium in texture and made from well-levigated clay. Storage jars, miniature pots, and a few grey-colored sherds were recovered. These findings

indicate that the early inhabitants of Baror were associated with an agricultural way of life.

Of particular importance is the discovery of Hakra ware at the lowest occupational levels, which provides valuable evidence regarding the early developmental stages of the Indus Civilization.

2. Harappan Period

During the second phase, Baror came fully under Harappan cultural influence. Archaeological evidence from this period includes residential structures, organized settlement patterns, and an increasingly sophisticated material culture. Mud-brick houses, planned streets, and structured settlement arrangements display strong similarities with broader Harappan urban traditions.

This suggests that Baror was not merely a small rural settlement but an integrated part of the organized social and economic framework of the Indus Civilization.

3. Mature Harappan Phase

During the Mature Harappan phase, Baror appears to have reached a more advanced stage of development. Excavations uncovered mud-

brick houses oriented in a north–south direction and systematically aligned along roads.

Such urban organization demonstrates a sophisticated understanding of town planning, comparable to major Harappan urban centers such as Mohenjo-daro and Harappa.

Major Archaeological Discoveries

The archaeological remains found at Baror provide valuable insights into the social, religious, economic, and cultural life of its inhabitants.

Human Skeleton and Social Status

A human skeleton adorned with ornaments was discovered at the site. This finding suggests the existence of burial customs, social distinctions, and practices related to personal adornment in Harappan society.

The Pitcher Filled with Beads

One of the most remarkable discoveries at Baror is an earthen pitcher containing approximately 8,000 beads or pearls.

This finding is of exceptional significance because it indicates advanced craftsmanship, bead-making

traditions, and possibly long-distance trade connections. The sheer quantity of beads suggests the presence of skilled artisans or the use of Baror as a trade center.

Seal and Indus Script

A steatite seal bearing characteristics of the Indus script was also recovered from Baror.

This discovery is highly significant, as it confirms that Baror was an active component of the Mature Harappan cultural sphere, where seals were likely used for administrative or commercial purposes.

Terracotta Objects

Excavations yielded circular and triangular terracotta cakes, sling balls with pinched decoration, beads, spacers, and ornamental objects. Similar artifacts have also been discovered at sites such as Kalibangan and Rakhigarhi, indicating strong cultural connections.

Stones Producing Red Pigment

Two stones capable of producing red-colored powder when rubbed together were also found. Archaeologists suggest that these may have been

used for coloring, decoration, ritual activities, or bodily ornamentation.

Large Clay Oven

A clay oven measuring approximately five meters in length and three meters in width was uncovered at the site. This structure may have been used for large-scale cooking or industrial activities, indicating the presence of organized communal or craft-related functions at Baror.

Economic and Cultural Importance of Baror

Archaeological findings indicate that Baror was associated with agricultural production, craftsmanship, jewelry-making, and possibly trade activities. Beads, terracotta artifacts, seals, and residential structures reveal a society possessing technical skill, organized living patterns, and cultural sophistication.

The similarities between Baror and other Harappan sites suggest that it was not an isolated cultural entity but rather part of a larger interregional civilization network characterized by exchanges in ideas, artistic traditions, trade, and urban lifestyles.

Baror and the Eastern Expansion of the Indus Civilization

One of the most important scholarly aspects of Baror is its evidence for the eastern expansion of the Indus Valley Civilization. The site demonstrates that Harappan communities were not restricted to major urban centers but sustained a vast social and economic system through smaller and medium-sized settlements.

Baror also suggests that regions of Rajasthan, which are relatively arid today, may once have been significantly more fertile, densely inhabited, and culturally active during antiquity.

Conclusion

Baror is an important archaeological site of the Indus Valley Civilization, representing continuity from the Pre-Harappan, Harappan, and Mature Harappan phases. The discoveries of seals, beads, terracotta objects, human skeletal remains, residential structures, and a large clay oven provide valuable evidence regarding the social and economic life of the region, while also illustrating the broad geographical spread, cultural integration, and technological sophistication of the Indus Civilization.

The study of Baror remains fundamentally important for understanding the evolution of the Indus Valley Civilization, urban planning, craftsmanship, and interregional cultural interaction. Future excavations and scientific analyses may reveal further important details about the historical development of this significant site.

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Bibi ji Bhit

Abstract

The archaeological heritage of Sindh includes numerous sites that document the cultural evolution of the region from early village communities to the urban centers of the Indus Valley Civilization. Among these sites is Bibi ji Bhit, located near the Baran Nai channel in Dadu District. Archaeological evidence indicates that the site was occupied during both the Amri and Harappan periods. Pottery remains constitute the most significant artifacts recovered from the site, providing valuable information about cultural continuity and interaction between pre-urban and urban phases of development. This article examines the geographical setting, archaeological evidence, and historical significance of Bibi ji Bhit.

Introduction

The transition from the early agricultural communities of the Amri culture to the urban society of the Harappan Civilization represents

one of the most important developments in the prehistory of South Asia. Archaeological sites preserving evidence of both cultural phases are particularly valuable because they help scholars understand the processes that led to the emergence of urbanism in the Indus Valley.

Bibi ji Bhit is one such site in Sindh that contains archaeological remains associated with both the Amri and Harappan periods. The site provides important evidence regarding cultural development and settlement continuity in the Baran Valley region.

Geographical Setting

Bibi ji Bhit is situated near the Baran Nai channel in Dadu District, Sindh. The location of the site near a watercourse would have offered favorable conditions for human occupation, including access to water, fertile land, and communication routes.

The Baran Valley region contains numerous archaeological settlements, suggesting that it was an important center of human activity throughout prehistoric and protohistoric times.

Archaeological Evidence

The archaeological remains recovered from Bibi ji Bhit indicate occupation during both the Amri and Harappan cultural phases. The most significant discoveries consist of pottery fragments and ceramic vessels.

The principal archaeological findings include:

- Pottery associated with the Amri cultural phase
- Pottery associated with the Harappan period
- Ceramic fragments representing different stages of occupation
- Surface remains indicating long-term settlement activity

The pottery assemblage is particularly important because ceramic styles often serve as chronological markers, enabling archaeologists to identify cultural affiliations and establish sequences of occupation.

Cultural Significance

The coexistence of Amri and Harappan cultural materials at Bibi ji Bhit suggests a long sequence of habitation and cultural development. The Amri culture represents a pre-urban phase characterized by village-based communities, while

the Harappan phase reflects the emergence of complex urban society within the Indus Valley Civilization.

The presence of both cultural traditions at a single site provides evidence for the gradual transformation of society rather than abrupt cultural replacement. Such sites are essential for understanding the origins and development of urbanism in ancient Sindh.

Historical Importance

Bibi ji Bhit contributes significantly to the reconstruction of prehistoric cultural history in western Sindh. The pottery remains demonstrate continuity of settlement and indicate participation in broader regional cultural networks.

The site's location near the Baran Nai channel further suggests that access to water resources played a crucial role in sustaining human occupation and facilitating cultural interaction between different communities.

Conclusion

Bibi ji Bhit is an important archaeological site in Dadu District that preserves evidence from both the Amri and Harappan periods. The pottery

remains recovered from the site provide valuable insights into cultural continuity, settlement development, and the transition from early village societies to the urban civilization of the Indus Valley. As a result, the site occupies a significant place in the archaeological study of Sindh and the broader history of South Asian civilization.

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Bet Dwarka

Introduction

The Indus Valley Civilization is one of the world's earliest urban civilizations, flourishing approximately between 3300 BCE and 1300 BCE across vast regions of South Asia. Major centers of this civilization, such as Mohenjo-daro, Harappa, Dholavira, Rakhigarhi, Lothal, and Kalibangan, have long remained the focus of scholarly investigation. However, for understanding the maritime trade, naval connections, and coastal settlements of the Indus Civilization, certain sites associated more closely with marine activity than inland commerce are equally significant. Among these, **Bet Dwarka** stands out as an important and distinctive archaeological site.

Bet Dwarka, also known as **Shankhodhar**, is an island located along the coast of the Indian state of Gujarat, where archaeological excavations have revealed evidence belonging to the Late Harappan phase. This site not only provides crucial information about the maritime trade and coastal

habitation of the Indus Civilization but is also deeply associated with ancient Indian religious traditions, especially legends concerning Krishna and Dwarka.

Geographical Location and Natural Environment

Bet Dwarka, or Shankhodhar, is situated at the mouth of the Gulf of Kutch on the western coastline of Gujarat. The island lies approximately 2 kilometers from the town of Okha and nearly 25 kilometers north of the city of Dwarka. The island extends roughly 8 kilometers in length from northeast to southwest and averages around 2 kilometers in width.

The name “Shankhodhar” is believed to derive from the abundance of **conch shells**, as the island has historically been an important source of marine shells and conches. Owing to its natural suitability for maritime activities, Bet Dwarka likely served as a natural harbor for ancient trading vessels.

Bet Dwarka and the Ancient Tradition of Dwarka

Bet Dwarka is considered part of the ancient city of **Dvārakā**, which is described in Indian epic literature as a sacred and historical city. According to the Mahabharata and the Skanda Purana, Dwarka was the capital city and royal residence of Krishna.

Gujarati scholar Umashankar Joshi suggested that **Antardvipa**, mentioned in the *Sabha Parva* section of the *Mahabharata*, may correspond to present-day Bet Dwarka, as the Yadava people are said to have traveled there by boat. Although historians hold varying opinions regarding this claim, it nevertheless suggests that Bet Dwarka functioned as an important maritime center in ancient times.

Beyond mythology, archaeological evidence indicates that the region continued to remain inhabited after the decline of the Indus Civilization and retained importance through several historical periods, including the era of the Maurya Empire.

Connection with the Indus Valley Civilization

The significance of Bet Dwarka becomes particularly evident when viewed within the

maritime framework of the Indus Valley Civilization. Archaeological investigations indicate that the site belonged to the **Late Harappan period**, a time when the major urban centers of the Indus Civilization were in decline, though coastal trade activities remained active.

Maritime trade played a fundamental role in the prosperity of the Indus Civilization. Evidence from port cities such as Lothal demonstrates that Harappan communities traded through the Arabian Sea with regions such as Mesopotamia, Oman, and the Persian Gulf. In this context, Bet Dwarka appears to have functioned as a coastal settlement actively engaged in trade, fishing, metallurgy, and marine resource utilization.

Archaeological Excavations and Discoveries

Archaeological excavations conducted during the 1980s uncovered numerous remains associated with the Late Harappan period at Bet Dwarka. These excavations yielded earthen pottery, metal objects, and various artifacts of daily use, clearly indicating that the site was once a well-organized human settlement.

1. Discovery of the Protective Wall

In 1982, archaeologists discovered a **580-meter-long protective wall**, estimated to date back to approximately **1500 BCE**. Scholars believe that this wall may have been constructed to protect the settlement from sea storms and waves. Later, due to marine transformations or powerful storms, parts of the structure became submerged underwater.

This discovery constitutes an important indication of the engineering capabilities of Late Harappan communities and their adaptation to coastal environments.

2. Harappan Seal

A **Late Harappan seal** was also discovered during excavations, suggesting the presence of administrative or commercial activities. In the Indus Civilization, seals were commonly used for trade, ownership identification, and administrative purposes.

3. Inscribed Jar

Researchers also uncovered an **inscribed jar**, bearing symbols or markings. Although the Indus script remains undeciphered, such artifacts provide valuable clues regarding social organization and systems of exchange.

4. Copper Smith’s Mold

A **coppersmith’s mold** discovered at Bet Dwarka offers evidence for metallurgical production and craftsmanship within the settlement.

5. Copper Fishhook

A **copper fishhook** was also found, demonstrating that fishing and marine food resources constituted an essential part of the local economy.

Marine Archaeology and International Trade

The greatest significance of Bet Dwarka lies in its contribution to **marine archaeology**. Underwater investigations recovered **stone anchors** and traces of ancient ship remains, providing strong evidence of maritime trade.

Researchers suggest that Bet Dwarka served as an important center along Arabian Sea trade routes. Merchants from the settlement may have traded:

- Conches and marine products
- Metals
- Beads and ornaments

- Textiles
- Spices

to distant regions.

Some scholars further argue that during historical periods, the island maintained commercial relations with the **Roman world**, supported by evidence from anchors and maritime remains.

Historical and Political Background

During the eighteenth century, Bet Dwarka and the surrounding Okhamandal region came under the control of the Gaekwad dynasty. During the Indian Rebellion of 1857, the **Vagher tribe** briefly captured the region, but in 1859, British forces and allied princely states regained control.

Following the independence of India in 1947, Bet Dwarka became part of the former **Saurashtra State**. Later, it was incorporated into Bombay State and, after the formation of Gujarat in 1960, remained within the jurisdiction of Jamnagar district. In 2013, it became part of the newly established **Devbhumi Dwarka district**.

Cultural and Religious Significance

Bet Dwarka is not only archaeologically significant but also occupies an important place in Hindu religious tradition. Several temples dedicated to Krishna, most of which were built toward the end of the eighteenth century, are situated on the island.

Even today, the island attracts thousands of pilgrims, making it a living example of continuity between ancient heritage and contemporary religious culture.

Conclusion

Bet Dwarka is one of the rare archaeological sites of the Indus Valley Civilization where maritime trade, coastal settlement, religious tradition, and archaeology converge in a single landscape. The evidence of Late Harappan remains, protective walls, seals, metallurgical activities, and marine anchors strongly indicates that the site was not merely a small settlement but an important maritime and commercial center.

The study of Bet Dwarka contributes significantly to our understanding of the maritime world of the

Indus Civilization, its trade networks, and coastal adaptations. Therefore, the site holds immense importance not only for the history of Gujarat or India but also for the broader cultural heritage of the entire Indus Valley Civilization.

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Bhagatrav

Introduction

The Indus Valley Civilization (IVC), regarded as one of the earliest urban civilizations in human history, occupies a distinguished place in world history because of its urban planning, trade networks, agricultural economy, artistic skill, and maritime connections. The core regions of this civilization included Sindh, Punjab, بلوچستان, Haryana, Rajasthan, and Gujarat, while its commercial and cultural influence extended to distant coastal regions. Among these areas, the coastal belt of Gujarat held special importance, where several Harappan archaeological sites have been discovered, including Lothal, Rangpur, Kuntasi, Bagasra, and Bhagatrav.

Bhagatrav is a small yet highly significant archaeological site of the Indus Civilization, located in Bharuch district of Gujarat, India. The site is specifically associated with the **Sorath Harappan phase** and is considered by archaeologists to be an important witness to the

southern maritime expansion of the Indus Civilization. This site was not only important for maritime trade but also functioned as a bridge between the urban core of the Indus Civilization and the local cultures of southern Gujarat.

Geographical Location and Setting

Bhagatrav is situated near Jetpur village in Hansot Taluka of Bharuch district, Gujarat. The site lies on the **southern bank of the Narmada River** and at the northern estuary of the **Kim Creek**, which eventually empties into the Arabian Sea. Located approximately 2 kilometers south of Jetpur village and nearly 60 kilometers southwest of Bharuch city, the geographical setting of the site made it highly suitable for maritime commerce.

The geographical position of the site was exceptionally important because it stood at the intersection of riverine and maritime trade. Through Kim Creek, small boats could reach the Arabian Sea, making Bhagatrav an important trading camp or harbor within the maritime network of the Indus Civilization.

Today, the site survives in the form of a small mound, approximately 2.4 meters high and extending over an area of 100–150 meters. However, scholars believe that the original

settlement was much larger and gradually diminished due to marine tides, river erosion, and environmental changes over time.

Environmental and Geographical Context

The environmental context of Bhagatrav plays an important role in understanding the ecological adaptations of the Indus Civilization. During the Harappan period, the region consisted of a dynamic estuarine environment shaped by coastal inlets, river outlets, and water channels.

During seasons of high tides, the region remained surrounded by water for nearly half of the year, creating marshy conditions. Such an environment made fishing, maritime transportation, and commercial activities possible. Palynological studies indicate that the region supported dry-climate vegetation such as **Acacia**, **Butea**, and other drought-resistant species.

Agriculture was based on crops such as **barley** and **wheat**, which were well adapted to low rainfall and dry environmental conditions. Alongside agriculture, fishing also formed an important component of the local economy, as evidenced by fish bones and otolith remains recovered from the site.

Discovery and Archaeological Excavation

Bhagatrav was formally identified in **1957–58** by the renowned archaeologist **S. R. Rao**, who later also excavated the famous Harappan port city of Lothal. Rao named the site "Bhagatrav" according to local traditions.

During the initial survey, Harappan pottery sherds were discovered on the surface, providing early evidence of the site's antiquity. Following this, the **Archaeological Survey of India (ASI)** carried out trial excavations, revealing approximately **7 feet of cultural deposits**.

In **2015**, the **Indian Institute of Technology, Gandhinagar (IIT Gandhinagar)** conducted modern excavations under the supervision of **Dr. Alok Kumar Kanungo**. This phase utilized advanced scientific methods, including:

- Stratigraphic excavation
- OSL/IRSL dating (luminescence dating)
- AMS radiocarbon dating
- Soil and botanical analysis

These investigations significantly clarified the historical sequence of the site.

Cultural Layers and Chronology

Excavations at Bhagatrav revealed four major cultural layers:

1. Sorath Harappan Layer

This is the lowest and oldest layer, occupied approximately between **2200 BCE and 1500 BCE**. The remains discovered from this level represent the regional Sorath style of Harappan culture.

2. Transitional Layer

This layer represents an intermediate period between the Harappan and later occupations, where limited signs of human activity were identified.

3–4. Medieval Layers

The uppermost layers yielded evidence of medieval occupation, especially between the **12th and 17th centuries CE**, when renewed commercial activities emerged at the site.

Harappan Period and Dating

Luminescence dating indicates that the earliest occupation at Bhagatrav began around **2200 BCE**. AMS radiocarbon analysis suggests that the final

Harappan phase continued until approximately **1900–1500 BCE**.

This period corresponds to the **de-urbanization phase** of the Indus Civilization, during which major urban centers weakened and smaller maritime and regional settlements became increasingly important.

Major Archaeological Discoveries

1. Pottery

A large quantity of fine red pottery was discovered at Bhagatrav, decorated with black painted motifs and designs.

The pottery types include:

- Long-necked jars
- Step-sided dishes
- Perforated vessels
- Bowls and cups
- Round-bottomed containers

A particularly important vessel fragment bearing an image of a **horned deity** was also found, providing important insight into possible religious beliefs.

2. Ornaments and Tools

The following objects were recovered:

- A **carnelian bead**
- **Chert tools**
- A miniature **terracotta bull**
- A **spindle whorl** used in thread-making

These objects indicate local industries and trade-related activities.

3. Maritime Evidence

Fish bones, marine remains, and a broken **stone anchor** suggest that the settlement was actively connected with maritime activities.

Bhagatrav: A Port or a Trading Camp?

Scholars generally believe that Bhagatrav functioned less as a fully developed port and more as a **maritime trading camp**. Compared with Lothal, which was a more organized urban port, Bhagatrav appears to have been smaller and less urbanized.

Its principal functions likely included:

- Procuring valuable stones from the Narmada Valley
- Collecting timber and other natural resources
- Serving as a temporary center for coastal trade

The site functioned as an important link connecting Saurashtra, Kachchh, and the central regions of the Indus Civilization.

Cultural and Historical Importance

Bhagatrav represents the **southern frontier** of the Indus Civilization. The site demonstrates that the civilization was not limited to major urban centers but that Harappan communities also adapted successfully to coastal and rural environments.

The site is especially important for understanding:

1. The evolution of maritime trade
2. Sorath Harappan culture
3. Regional cultural adaptations
4. Economic changes during the decline of the Indus Civilization

Preservation Challenges

Today, Bhagatrav faces serious threats. Coastal erosion, riverine changes, and agricultural activities continue to damage the site. Local farming practices often disturb archaeological remains, while no strong conservation infrastructure currently exists.

Researchers have recommended:

- Installing protective fencing around the site
- Continuing modern archaeological surveys
- Integrating the area into cultural tourism networks
- Raising awareness among local communities

Conclusion

Bhagatrav is a small but exceptionally significant archaeological site of the Indus Valley Civilization that offers valuable insights into maritime expansion, regional trade, and cultural adaptations within the Harappan world. The site demonstrates that the Indus Civilization was not confined solely to major cities such as Mohenjo-daro or Harappa; rather, its commercial and cultural influence extended to the southern coasts of Gujarat.

The study of Bhagatrav is particularly important in understanding the late phase of the Indus Civilization, maritime economies, and environmental transformations. Future archaeological, biological, and genetic research may reveal new dimensions of this remarkable site.

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Bhirrana

Introduction

The Indus Valley Civilization is one of the earliest urban civilizations in human history, spread across present-day Pakistan, northwestern India, and parts of Afghanistan. Traditionally, its peak period was considered to be between 2600 BCE and 1900 BCE. However, recent archaeological discoveries have challenged this notion. Among these sites, **Bhirrana** has emerged as a highly significant location. Situated in the Fatehabad district of Haryana, India, Bhirrana is regarded by many archaeologists as the oldest known site of the Indus Civilization, with beginnings traced back to around 7570–6200 BCE. This makes it approximately 9,000 years old.

Geographical Location of Bhirrana

Bhirrana lies in Haryana's Fatehabad district, on the banks of the now-dry **Ghaggar-Hakra River**. Many scholars associate this river with the ancient Saraswati, though academic debates continue. Its geographical setting was crucial, as the

availability of water, pastures, and fertile land made it suitable for early agricultural settlements.

Excavations and Discoveries

Excavations conducted by the Archaeological Survey of India revealed multiple cultural layers, showing continuous habitation for nearly 9,000 years. Four major cultural phases were identified:

1. Hakra/Pre-Harappan Phase
2. Early Harappan Phase
3. Early Mature Harappan Phase
4. Mature Harappan Phase

This continuity demonstrates that the Indus Civilization was not a sudden phenomenon but the result of gradual social, economic, and cultural evolution over millennia.

New Debate on Antiquity

Earlier scholarship dated the Indus Civilization between 3300–1900 BCE, with its urban peak between 2600–1900 BCE. However, radiocarbon dating from Bhirrana suggests much earlier origins, possibly as far back as 7570 BCE. This indicates that the roots of the civilization are far older than previously believed, evolving slowly

from early agrarian communities into urban centers.

Thus, Bhirrana holds comparative importance alongside other ancient civilizations such as:

- Mesopotamia
- Ancient Egypt

Architecture and Urban Planning

Findings at Bhirrana show that early inhabitants lived in underground pits, later transitioning to organized urban settlements. Evidence includes:

- Mud-brick houses
- Planned streets
- Drainage systems
- Water purification arrangements
- Organized residential layouts

These features highlight the presence of early forms of social organization, engineering, and urban planning.

Cultural Artifacts and Art

Artifacts discovered include:

- Hakra-style pottery
- Copper tools

- Bone implements
- Terracotta figurines
- Beads of semi-precious stones

A notable find is a terracotta fragment depicting a dancing girl, reminiscent of the famous “Dancing Girl” figurine from Mohenjo-daro, showing artistic continuity within the Indus Civilization.

Evidence of Animal Husbandry and Agriculture

Large deposits of animal bones suggest a strong agrarian and pastoral economy. Identified species include:

- Cattle
- Buffalo
- Sheep
- Goats
- Nilgai
- Deer

Ancient DNA analysis confirmed cattle remains, indicating organized domestication practices. This points to:

- Milk production
- Use of animals in farming
- Ploughing
- Meat and leather utilization

Scholarly Debates

Not all scholars agree on Bhirrana's status as the oldest Indus site. Key points of contention include:

1. Accuracy of radiocarbon dating
2. Whether early phases should be classified as "Harappan"
3. The extent of urban life versus agrarian settlement

Despite these debates, most scholars acknowledge Bhirrana's importance in understanding the early evolution of the Indus Civilization.

Conclusion

Bhirrana is a foundational archaeological site for studying the Indus Civilization's development. Its cultural continuity, architectural evidence, agrarian economy, and pastoral practices demonstrate that the Indus Civilization was the product of thousands of years of gradual evolution.
This site not only challenges conventional views of the civilization's antiquity but also suggests that the roots of urban life in South Asia are far deeper than previously imagined.

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Chanhudaro

Introduction

The Indus Valley Civilization is regarded as one of the oldest and most organized urban civilizations in the world, flourishing approximately from 3300 BCE to 1300 BCE across vast regions of South Asia. Numerous important archaeological sites of this civilization have been discovered, among which Mohenjo-daro, Harappa, Dholavira, Rakhigarhi, Kot Diji, Amri, and Chanhudaro hold significant importance. Among these sites, **Chanhudaro (Chanhu-daro)** occupies a distinctive position due to its industrial importance, bead-making industry, seal manufacturing, urban planning, and technical craftsmanship.

Chanhudaro was not only a well-organized urban settlement of the Indus Civilization but also served as an industrial centre where handicrafts, metallurgy, seal production, and jewelry manufacturing were carried out on a large scale.

Archaeologists have identified this site as one of the principal industrial centres of the Indus Civilization.

Geographical Location and Meaning of the Name

Chanhudaro is an important archaeological site located in Sindh, Pakistan, approximately **130 kilometers south of Mohenjo-daro**. The site lies nearly 12 miles east of the present course of the Indus River; however, historical and geographical evidence suggests that in antiquity, the Indus River or one of its branches flowed near this settlement.

The term **“Chanhun-jo-daro”** in the Sindhi language means **“the mound of Chanhun”** or **“Chanhun’s mound.”** Archaeological investigations indicate that the site consists of **three low mounds**, which collectively formed a single urban settlement spread across approximately **7 hectares**.

Discovery and Archaeological Excavations

The scholarly identification of Chanhudaro was first made in **1931 by the renowned archaeologist Nani Gopal Majumdar (N. G. Majumdar)**. During his survey of various Indus Civilization sites in Sindh, he discovered the settlement and provided preliminary information regarding its significance.

Later, during **1935–36**, extensive excavations were conducted under the joint expedition of the **American School of Indic and Iranian Studies** and the **Boston Museum of Fine Arts**, supervised by the prominent British archaeologist **Ernest John Henry Mackay (Ernest J. H. Mackay)**. These excavations revealed significant information regarding the city's layout, industries, residential structures, and administrative organization.

After the independence of Pakistan, the distinguished Pakistani archaeologist **Mohammed Rafique Mughal** also conducted exploratory and research work in the region.

Since **2015**, modern excavations have been undertaken by the **French Archaeological Mission in the Indus Basin (MAFBI)** under the leadership of French archaeologist **Aurore Didier**, in collaboration with the Department of Archaeology and Museums of Pakistan and the Culture Department of the Government of Sindh.

Historical Period and Settlement

Chanhudaro remained inhabited approximately from **4000 BCE to 1700 BCE**, though it reached its peak during the **Mature Harappan Period**. A distinctive feature of this site is that, unlike other large Harappan cities, it appears to have functioned less as a political or religious centre and more as an industrial and economic hub.

Some scholars consider Chanhudaro an **"industrial town"** of the Indus Civilization, inhabited by a substantial population of craftsmen and artisans.

Urban Planning and Architectural Features

The urban planning of Chanhudaro bears significant resemblance to other major Indus cities, particularly **Mohenjo-daro** and **Harappa**.

The site reveals:

- Extensive use of baked bricks;
- Organized streets and residential blocks;
- Designated areas for workshops and industrial activities;

- Buildings that may have served as warehouses.

These features demonstrate that the city was not constructed randomly but according to deliberate urban planning. Such organization reflects the advanced civic administration of the Indus Civilization.

Industry and Craftsmanship: The Economic Strength of Chanhudaro

1. Bead Industry

Chanhudaro was particularly famous for its **bead-making industry**. Excavations uncovered a large **bead-making workshop**, including furnaces used in the manufacturing process.

The following materials were used for bead production:

- Carnelian
- Jasper
- Quartz
- Gold
- Copper
- Bronze

- Shell
- Terracotta (baked clay)
- Faience

Beads were manufactured in various forms, including:

- Circular
- Disc-shaped
- Cylindrical
- Barrel-shaped
- Segmented

This demonstrates a highly developed level of technical skill and industrial specialization.

2. Seal Manufacturing

Chanhudaro was among the important cities of the Indus Civilization where **Harappan seals** were manufactured.

These seals were likely used for administrative purposes, trade, ownership identification, and possibly religious functions. The discovery of a large number of seals suggests that the city played an important role in the commercial and administrative network of the civilization.

3. Shell and Metal Industry

Artifacts made from shell include:

- Bangles
- Ladles
- Decorative objects

Metal objects discovered include:

- Copper knives
- Spears
- Razors
- Axes
- Vessels
- Fishhooks

Due to the extensive use of metals, Ernest Mackay famously referred to the site as the **"Sheffield of the British Empire."**

Social and Cultural Life

The archaeological remains indicate that the inhabitants of Chanhudaro were technologically advanced and socially organized.

Objects recovered include:

- Toy cart models;
- A bird-shaped whistle;

- Pottery vessels;
- Ornaments;
- A broken human figurine, possibly representing a dancer or spear thrower.

These objects provide insights not only into daily life but also into the artistic sensibilities and cultural expressions of the people.

Agriculture and Food Production

Evidence suggests that the inhabitants cultivated:

- **Sesame**, likely for oil production;
- **Peas**, which were also an important crop.

This indicates that alongside industrial activity, an agricultural economy was also practiced.

Indus Script and Linguistic Importance

Chanhudaro holds great significance for the study of the **Indus Script**.

A unique sign, **“||/”**, has been found at the site, which is rare or absent at other settlements. According to scholar **Asko Parpola**, this symbol

may have represented the name or identity of the city.

This discovery is considered significant for attempts to decipher the Indus Script.

Trade and Economic Networks

The industrial products of Chanhudaro—especially beads, seals, and metal tools—suggest that the city maintained trade connections with:

- Mohenjo-daro;
- Harappa;
- Rakhigarhi;
- Coastal settlements of Gujarat;
- And possibly Mesopotamia.

The large-scale production of carnelian beads provides evidence of long-distance and international trade.

Causes of Decline

Several theories have been proposed regarding the decline of Chanhudaro:

1. Change in the Course of the Indus River

Researchers argue that shifts in the river's course and water scarcity adversely affected life in the region.

2. Climatic Changes

Droughts and environmental transformations may have weakened the settlement.

3. Economic Decline

Changes in trade routes and weakening urban systems may also have contributed significantly.

Importance in Archaeological Studies

The significance of Chanhudaro is exceptional for several reasons:

1. It was an important industrial centre of the Indus Civilization;
2. It specialized in large-scale production of beads and seals;
3. It presents an advanced model of urban planning;
4. It is important for the study of the Indus Script;

5. It provides evidence of sophisticated craft production and trade systems.

The site demonstrates that the Indus Civilization consisted not only of major political or religious centres but also of specialized industrial towns.

Conclusion

Chanhudaro was an important, advanced, and multifaceted urban settlement of the Indus Valley Civilization, distinguished particularly for its industrial, artisanal, and commercial significance. Archaeological discoveries indicate that the people of the Indus Civilization were not merely an agricultural society but were also highly advanced in technical, industrial, and economic fields. The bead industry, seal production, metallurgy, and organized urban life stand as testimony to the intellectual and practical achievements of this civilization.

Future excavations at Chanhudaro may provide answers to many unresolved scholarly questions concerning the Indus Civilization, particularly in relation to the Indus Script, trade networks, and urban economic systems.

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Chaunro

The ancient archaeological site of Chaunro is located in Dadu District, to the south of the Bandhari stream. The site consists of a conical mound and an adjoining lower settlement area, suggesting the presence of human habitation during different occupational phases. The structural layout and geographical setting indicate that Chaunro was likely associated with an early rural community.

Archaeologist Nani Gopal Majumdar conducted excavations at the site, during which stone walls were uncovered. These architectural remains provide evidence of organized habitation and permanent settlement structures. Majumdar associated the site with the rural cultural phase that preceded the urban development of the Indus Valley Civilization.

Red and buff-colored pottery discovered at the site closely resembles ceramics previously unearthed from the Amri Culture site of Amri. The pottery is decorated with fine designs in chocolate

and pale pigments, reflecting the artistic craftsmanship and aesthetic traditions of the period. Archaeological findings further indicate that these vessels were manufactured on a potter's wheel and subsequently fired, demonstrating a significant degree of technological advancement in ceramic production.

In addition, archaeologist Henry Cousens Lambrick recovered a flint blade from the site measuring more than five inches in length. Such tools provide valuable evidence regarding hunting practices, cutting activities, and everyday subsistence tasks, while also illustrating the technological sophistication of prehistoric tool-making traditions.

Chaunro is therefore regarded as an important archaeological site for understanding the prehistoric rural cultures of Sindh, ceramic traditions, and early human settlement patterns. The site is particularly significant for the study of the Amri cultural phase and the cultural developments that preceded the urban emergence of the Indus Valley Civilization.

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Chhati Jo Kandh

Introduction

The study of prehistoric Sindh places great importance on archaeological sites that provide evidence of rural cultures preceding the urban phase of the Indus Civilization. Chhati Jo Kandh is one such significant archaeological site, located near Chor Lak on the Baran Nai channel. The artifacts recovered from this site, particularly pottery remains, indicate that the settlement was associated with the early phases of the Amri Culture. The archaeological evidence offers valuable insights into the lifeways, craftsmanship, and cultural development of ancient communities in Sindh.

Geographical Setting

Chhati Jo Kandh is situated near Chor Lak along the Baran Nai channel, a region connected with the eastern foothills of the Kirthar Range. The surroundings of Baran Nai and its associated channels have supported human habitation since

ancient times. The availability of water, fertile land, and natural resources made the area favorable for settlement and agricultural activities during prehistoric times.

Archaeological Evidence

The remains discovered at the site suggest that Chhati Jo Kandh belongs to the rural cultural phase of prehistoric Sindh. Pottery recovered from the site closely resembles the ceramics found in the earliest occupational layers of the archaeological site of Amri. This similarity in form, decoration, and manufacturing techniques indicates cultural and technological links between the two settlements.

Pottery is regarded as one of the most important sources for identifying and understanding ancient cultures because its style, decoration, and production methods reflect the technological capabilities and cultural traditions of prehistoric societies. The ceramics from Chhati Jo Kandh display characteristics that are commonly associated with the Amri cultural tradition and the development of early village communities in Sindh.

Relationship with the Amri Culture

Amri is one of the most important archaeological sites in Sindh and is known for representing a distinctive pre-Harappan cultural tradition. The Amri Culture is generally considered to represent a developmental stage that preceded the urban phase of the Indus Civilization. The close resemblance between the pottery from Chhati Jo Kandh and the ceramics from the earliest levels at Amri suggests that this settlement formed part of the broader Amri cultural sphere.

It is possible that Chhati Jo Kandh functioned as a small agricultural or pastoral settlement connected to a wider network of communities sharing similar cultural traditions. The study of such sites contributes significantly to understanding the transition from rural village life to the emergence of urban civilization in the Indus Valley.

Historical Significance

Chhati Jo Kandh is an important archaeological site for understanding the prehistoric period of Sindh. It provides evidence for the geographical spread of the Amri Culture and demonstrates the existence of shared cultural traditions across different regions of Sindh. The artifacts recovered from the site indicate that organized rural communities existed in the region long before the

rise of the urban centers of the Indus Civilization. These communities had already developed agricultural practices, craft production, and distinctive material cultures.

Conclusion

Chhati Jo Kandh is a significant archaeological site that contributes valuable information to the study of the rural cultures of prehistoric Sindh. The pottery recovered from the site demonstrates a strong cultural affiliation with the Amri tradition and helps scholars understand the cultural continuity that characterized the early development of civilization in the Indus region. Future archaeological investigations and scientific excavations at the site may reveal additional evidence that further enriches our understanding of Sindh's ancient past.

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Dabar Kot

Introduction

Dabar Kot is an important archaeological site located south of Loralai in the province of Balochistan, Pakistan. The site holds significant value for understanding the cultural development of the **Indus Valley Civilization** and the prehistoric societies that preceded it. Owing to its large mound, strategic location along ancient trade routes, and evidence of multiple cultural occupations, Dabar Kot has attracted considerable attention from archaeologists. The information obtained from this site contributes to our understanding of the ancient cultural interactions between present-day Pakistan and Afghanistan.

Geographical Location

Dabar Kot is situated south of the city of **Loralai** in **Balochistan**. The site lies along an ancient route leading to **Kandahar**, making it an important corridor for trade, migration, and cultural exchange in antiquity. The mound rises

approximately 113 feet (34.4 meters) above the surrounding plain and has a diameter of about 1,255 feet (382 meters), making it one of the largest archaeological mounds in the region.

Archaeological Significance

Archaeological investigations at Dabar Kot have revealed remains associated with the Indus Valley Civilization in the upper occupational layers of the mound. These findings indicate that the site was inhabited during the third millennium BCE and was connected to the broader Harappan cultural sphere. The archaeological evidence suggests that Dabar Kot may have served not only as a settlement but also as a center of trade and cultural interaction.

Researchers have proposed that further excavations could uncover deeper cultural layers predating the Indus Civilization. Such discoveries would provide valuable insights into the prehistoric cultural sequence of Balochistan and the development of early settled communities in northwestern South Asia.

Relationship with the Indus Valley Civilization

The remains discovered at Dabar Kot demonstrate its association with the urban traditions of the

Indus Valley Civilization. Like major Harappan centers such as Harappa and Mohenjo-daro, Dabar Kot provides evidence of ancient settlement, trade, and social organization. The site also highlights the cultural connections between Balochistan and Sindh, illustrating the extensive geographical reach of the Harappan Civilization.

Research Potential

Dabar Kot has not yet been fully excavated, leaving substantial opportunities for future archaeological research. Further investigations may uncover residential structures, pottery assemblages, tools, and other cultural materials that could enhance our understanding of the region's history. In particular, excavation of the lower occupational layers may yield evidence related to Neolithic, Chalcolithic, and Early Bronze Age cultures in Balochistan.

Conclusion

Dabar Kot is a significant archaeological site that contributes to our understanding of the Indus Valley Civilization and earlier phases of human occupation in Balochistan. Its strategic location, large mound, and potential for preserving a long cultural sequence make it one of the most

important prehistoric sites in Pakistan. Future archaeological investigations are likely to provide valuable information regarding the cultural history of ancient Balochistan and its connections with neighboring regions.

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Daimabad

Introduction

Daimabad is one of the significant archaeological sites of the Indian subcontinent, situated in the Ahmednagar district of present-day Maharashtra on the bank of the Pravara River. This site holds particular importance because it serves as crucial evidence for understanding the southern expansion of the Indus Valley Civilization and the evolution of indigenous Chalcolithic cultures in the Deccan region. Daimabad was not merely an ancient settlement but rather a cultural crossroads where influences from the later phases of the Indus Civilization merged with the social transformations of local agrarian communities to produce a new civilizational form.

The site remained continuously occupied from approximately 2200 BCE to 1000 BCE, making it one of the few archaeological sites in South Asia that provides clear evidence of long-term cultural continuity. Residential structures, burial traditions, pottery, metallurgy, agricultural

evidence, and especially the famous Bronze Hoard discovered during excavations grant Daimabad exceptional significance in archaeological studies.

Geographical Location and Environmental Context

Daimabad is located in the Shrirampur taluka of Ahmednagar district in the state of Maharashtra. The site was established on the left bank of the Pravara River, a major tributary of the Godavari River. Due to its riverbank location, the area offered favorable conditions for agriculture, water accessibility, and human settlement.

The natural environment of Daimabad was semi-arid, characterized by limited rainfall. Nevertheless, seasonal monsoons and river systems created conditions conducive to agriculture. Archaeobotanical evidence suggests that the inhabitants cultivated a variety of crops, including wheat, sorghum, millet, rice, and pulses. Animal remains indicate that cattle, goats, sheep, and buffalo formed an essential component of the economic system.

This environment provided Daimabad with an agricultural economy that shared similarities with other agrarian centers of the Indus Civilization

while simultaneously adapting to the local ecological conditions of the Deccan region.

Discovery and Excavations

The archaeological site of Daimabad was first discovered in 1958 by B. P. Bopardikar of the Archaeological Survey of India (ASI). During initial surveys, pottery fragments, stone tools, and other ancient remains were found, indicating the antiquity of the settlement.

The first formal excavation was conducted during 1958–59 under the direction of M. N. Deshpande. Later, between 1975 and 1979, extensive excavations were carried out by S. A. Sali, which provided detailed insights into the site's five cultural phases.

Excavations revealed urban planning, residential houses, storage facilities, burial grounds, metallurgical centers, and possible evidence of religious activities, all pointing toward the existence of an organized society.

Cultural Phases

1. Savalda Culture (2200–2000 BCE)

This phase represents the earliest occupation at Daimabad. The inhabitants relied primarily on an agro-pastoral economy. Houses were constructed of mud and generally consisted of two or three rooms.

Pottery from this phase often displays black-painted depictions of animals, weapons, and geometric motifs. Conch shell remains were also discovered, suggesting trade connections with coastal regions.

2. Late Harappan Phase (2000–1800 BCE)

This is among the most significant phases of Daimabad, as influences from the Indus Valley Civilization become clearly visible. Fine pottery, Harappan-style seals, and symbols of undeciphered script have been recovered.

During this period, Daimabad may have represented the southern frontier of the Indus Civilization. According to many scholars, it functioned as a trade center through which economic and cultural interactions between northern and southern regions were maintained.

3. Daimabad Culture (1800–1600 BCE)

This phase is viewed as a symbol of local cultural evolution. Pottery styles underwent transformation, incorporating depictions of animals and geometric patterns.

Evidence of metal smelting has also been found from this period, indicating that metallurgy had attained a developed stage at the local level.

4. Malwa Culture (1600–1400 BCE)

During this phase, settlement organization became increasingly structured. Residential architecture became more systematic, while possible evidence of religious activities, such as fire altars, was uncovered.

Pottery associated with the Malwa Culture displays black-painted motifs, animal depictions, and geometric patterns, reflecting the artistic traditions of the period.

5. Jorwe Culture (1400–1000 BCE)

This was the final major occupational phase at Daimabad. The settlement expanded to nearly 30 hectares. Evidence of mud fortifications, systematically arranged houses, and urn burials of children has been discovered.

This phase is regarded as an indicator of social organization, agricultural maturity, and developed craftsmanship.

The Daimabad Bronze Hoard: A Critical Review

In 1974, a local farmer discovered four unique bronze sculptures at Daimabad, now widely known in archaeological scholarship as the "Daimabad Bronze Hoard."

The hoard includes:

1. A chariot drawn by two bulls with a human figure
2. An elephant
3. A rhinoceros
4. A buffalo

These sculptures were produced using the lost-wax casting technique, demonstrating highly advanced metallurgical knowledge.

Scholars continue to debate whether these bronzes genuinely belong to the Harappan period or to a later historical phase. However, most researchers associate them with the Late Harappan phase due to their stylistic resemblance to Indus artistic traditions and metallurgical practices.

Economic Life

The economy of Daimabad was fundamentally agrarian and pastoral. Crop cultivation and livestock rearing formed the backbone of subsistence. Excavations have uncovered grain storage facilities, agricultural tools, and faunal remains.

Trade also played a significant role. Conch shells, semi-precious stone beads, and metallurgical evidence indicate that Daimabad participated in long-distance economic exchanges with neighboring regions.

Social and Religious Life

The residential structures uncovered at Daimabad suggest the existence of a socially organized society, possibly characterized by some degree of social stratification. Certain houses were larger than others, which may indicate differences in status.

Burial practices, particularly the interment of children in urns, provide clues regarding religious beliefs. Fire altars suggest the possibility of ritualistic or sacrificial traditions involving fire worship.

Connections with the Indus Valley Civilization

Daimabad serves as an important example of the southern diffusion of the Indus Valley Civilization. Harappan-style seals, script symbols, fine pottery, and the Bronze Hoard collectively testify to cultural interactions.

The site may be regarded as a “cultural bridge” between the Indus Civilization and the indigenous cultures of the Deccan, where elements of both traditions converged.

Conclusion

Daimabad is an exceptionally important archaeological site in the ancient history of South Asia, providing critical evidence for understanding the later phases of the Indus Valley Civilization, indigenous Chalcolithic cultures of the Deccan, and the development of agrarian societies. The site demonstrates that the influence of the Indus Civilization extended beyond Sindh and Punjab into southern regions of the Indian subcontinent.

The Daimabad bronzes, cultural continuity, agricultural systems, and evidence of social organization occupy a foundational place in the study of early South Asian civilization. Future scientific research and technologically advanced

excavations may reveal further insights into this remarkable archaeological site.

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Damb Sadaat

Introduction

Damb Sadaat is an important archaeological site located in the Quetta Valley of Balochistan and holds significant importance for understanding the early cultural development that eventually contributed to the rise of the Indus Civilization. Situated approximately ten miles south of Quetta on the road leading to Kalat, the site represents one of the settlements whose cultural traditions formed part of the foundation of the later urban civilization of the Indus Valley. Archaeological excavations conducted by Stuart Piggott in 1942 revealed valuable information regarding the social organization, economy, religion, and craftsmanship of its ancient inhabitants.

Geographical Background

Damb Sadaat is located in the fertile Quetta Valley, a region that has historically served as an important center of trade and cultural interaction.

The valley functioned as a natural corridor connecting the Indus Valley with Afghanistan and Iran, facilitating the movement of people, goods, and ideas. This strategic position contributed to the development of a distinctive cultural tradition in the region.

Excavations and Cultural Stratigraphy

During the excavations led by Stuart Piggott, the site was excavated down to the natural soil level, revealing three distinct occupational layers. These layers represent different phases of human habitation. The lowest level yielded finely made painted pottery, while the uppermost layer contained the remains of a platform. At one corner of its foundation, archaeologists discovered a stone-built chamber containing a female figurine mounted on a small pedestal. Many scholars interpret this figure as representing a Mother Goddess or fertility deity.

Residential Architecture

Archaeological evidence indicates that the inhabitants lived in permanent houses composed of several small rooms. These rooms generally measured approximately ten feet in length and seven feet in width. Stone was used in the foundations, while the walls were primarily

constructed from mud bricks. In some cases, stone was also incorporated into the walls. Many houses contained stone-paved floors and hearths located in the corners of rooms, reflecting aspects of daily domestic life.

Urban Planning

The urban layout of Damb Sadaat was not as carefully planned as the later Indus cities such as Mohenjo-daro and Harappa. Its streets were relatively narrow and irregular. Nevertheless, the presence of permanent structures, organized residential spaces, and defensive features indicates that it was a well-established settlement rather than a temporary encampment.

Economy and Subsistence

Large storage jars recovered from the site suggest that agriculture played a central role in the local economy. Archaeologists also discovered cups, goblets, and vessels associated with the preparation and consumption of beverages. Animal bones, particularly those of sheep and goats, indicate that animal husbandry and meat consumption were important aspects of daily life.

Agriculture appears to have been the primary occupation of the inhabitants, while trade and

pastoralism also contributed significantly to the settlement's economy. Stone mortars and related tools provide evidence of grain processing and food preparation activities.

Craft Production and Artistry

The pottery of Damb Sadaat is notable for its fine craftsmanship and painted decorative motifs. Potters used red, black, and brown pigments to create geometric and floral designs. This ceramic tradition displays similarities with later pottery styles associated with the Indus Civilization.

Beads made of stone, shell, and bone were also recovered from the site, indicating the development of personal ornamentation and specialized craft production.

Religious Beliefs

A considerable number of terracotta female figurines were discovered during excavations. These figures are depicted wearing necklaces and having long hair extending to the waist. Archaeologists generally interpret them as representations of a Mother Goddess associated with fertility, agricultural productivity, and prosperity.

In addition, figurines of humped bulls and other animals were found, suggesting the economic and symbolic importance of animals within the community.

Significance of Symbolic Markings

Several pottery vessels from Damb Sadaat bear incised symbols and marks. These signs are often regarded as early forms of symbolic communication and may represent ownership marks, potters' marks, or identifiers used within the community. Such markings are important because they may reflect the gradual development of symbolic systems that eventually culminated in the script of the Indus Civilization.

Defensive Features

Remains of a surrounding wall or fortification have been identified at the site. These defensive structures were likely constructed to protect the settlement and its resources. Their presence suggests a degree of social organization and concern for community security.

Conclusion

Damb Sadaat is one of the most significant archaeological sites in Balochistan for

understanding the early cultural developments that preceded the rise of the Indus Civilization. The site's residential architecture, painted pottery, religious figurines, animal representations, metal tools, and symbolic markings reflect a sophisticated agricultural society that contributed to the cultural foundations of later urban civilization in the Indus Valley. Consequently, Damb Sadaat occupies an important place in the archaeological and historical study of ancient South Asia.

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Danbh Buthi

Abstract

Danbh Buthi is an important archaeological site located in Dadu District, Sindh, representing both the rural cultural traditions and the later urban phase of the Indus Civilization. Situated approximately 10 kilometers southwest of Jahangara village, the site has yielded significant archaeological remains, including structural foundations, wall remains, stairway features, ceramics associated with the Amri and Harappan cultural phases, and a human skeleton discovered during excavation. The archaeological evidence suggests that Danbh Buthi was occupied during both the pre-urban rural cultural stage and the subsequent urbanized phase of the Indus Civilization, thereby contributing valuable insight into settlement continuity and cultural transformation in prehistoric Sindh.

Geographical Location and Archaeological Context

The archaeological remains of Danbh Buthi are situated in Dadu District, approximately 10 kilometers southwest of Jahangara village. The site occupies an important position within the archaeological landscape of western Sindh, a region known for numerous prehistoric settlements associated with the Bronze Age cultural horizon.

Archaeological investigations conducted by scholars, including Flem and N. G. Majumdar, revealed traces of structural remains at the site. Excavations identified indications of an elevated structural platform, with visible remains of walls located along its slopes. These architectural features provide valuable evidence for the construction techniques and settlement organization practiced by the inhabitants.

Architectural Features and Settlement Pattern

One of the notable archaeological characteristics of Danbh Buthi is the presence of structural remains that indicate organized habitation. On the southern side of the mound, archaeologists identified evidence of a stairway, suggesting a planned architectural arrangement. Furthermore, remains of foundational walls were discovered extending toward the south, east, and north of the site.

These architectural traces strongly suggest the presence of residential rooms or enclosed domestic spaces, indicating that the settlement possessed a structured habitation pattern rather than temporary occupation alone. The remains further imply an evolving settlement system in which architectural planning played an increasingly important role.

Human Remains and Archaeological Significance

During excavations at the mound, N. G. Majumdar reportedly discovered a human skeleton, an important archaeological find that may contribute to future studies of burial practices, biological characteristics, and health conditions of the settlement's inhabitants.

Human skeletal remains are particularly significant in archaeological investigations because they offer valuable evidence regarding demography, social organization, and cultural practices associated with death and burial in ancient communities.

Ceramic Tradition and Cultural Affiliation

The pottery recovered from Danbh Buthi demonstrates close cultural association with both the Amri and Harappan periods. Ceramic assemblages resembling those of the Amri cultural

phase suggest an earlier rural occupation, whereas similarities with Harappan pottery indicate later interaction with or incorporation into the urban cultural system of the Indus Civilization.

The coexistence of material remains associated with both Amri and Harappan traditions strongly suggests that Danbh Buthi served as a transitional settlement, preserving evidence of both the rural cultural phase and the later urban civilization. This continuity highlights the gradual socio-cultural transformation that characterized many settlements in Sindh during the Bronze Age.

Conclusion

Danbh Buthi constitutes an important archaeological site for understanding the transition from rural settlement traditions to urban civilization in prehistoric Sindh. Architectural remains, including walls, stairways, and room foundations, reveal evidence of organized habitation, while the discovery of ceramics associated with both the Amri and Harappan traditions demonstrates cultural continuity across different occupational phases. The recovery of a human skeleton further enhances the archaeological significance of the site. Consequently, Danbh Buthi provides valuable

evidence for reconstructing patterns of settlement development and cultural evolution within the broader framework of the Indus Civilization.

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Deh Mari Sabri

Abstract

Deh Mari Sabri is an important archaeological site located in Nawabshah District (present-day Shaheed Benazirabad), Sindh, associated with the Harappan phase of the Indus Civilization. Situated near the village of Nawaz Dahri, the site has yielded a range of archaeological materials, including red pottery decorated with black-painted motifs, a terracotta bull figurine, and fragments of utility-related artifacts. These discoveries provide valuable insight into the material culture, craftsmanship, and everyday life of the Harappan inhabitants of the region.

Geographical Location and Archaeological Context

The archaeological remains of Deh Mari Sabri are located near the village of Nawaz Dahri in Nawabshah District, Sindh. The site represents one of the settlements in central Sindh associated

with the urban phase of the Indus Civilization, particularly the Harappan cultural tradition.

From an archaeological perspective, the site is significant because the recovered artifacts contribute to scholarly understanding of Harappan material culture and regional settlement patterns. Its geographical location further suggests that Deh Mari Sabri formed part of the broader network of settlements within the Indus Valley Civilization.

Material Culture and Excavated Artifacts

Among the most significant discoveries at Deh Mari Sabri are pottery vessels decorated with black-painted motifs over a red surface. This ceramic style is widely recognized as a characteristic feature of the Harappan period and reflects both technical expertise and aesthetic sophistication in pottery production.

In addition, archaeologists recovered a terracotta bull figurine from the site. Such figurines may have served symbolic, religious, or recreational purposes. Considering the symbolic significance of bulls within the Indus Civilization, these artifacts are often interpreted in relation to agriculture, animal husbandry, and aspects of social life.

The site also yielded fragments of utility-related artifacts, which may have been associated with domestic, craft-related, or structural functions. Such finds offer important clues regarding the daily activities, artisanal traditions, and economic practices of the settlement's inhabitants.

Harappan Cultural Affiliation

The nature of the pottery, animal figurines, and associated artifacts discovered at Deh Mari Sabri strongly indicates its affiliation with the Harappan period of the Indus Civilization. The black-painted red pottery closely resembles ceramic traditions widely distributed across Harappan settlements and constitutes an important marker of cultural identity during the period.

These discoveries suggest that Deh Mari Sabri formed an integral part of the cultural and economic sphere of the Indus Civilization, where pottery production, craftsmanship, and symbolic artistic expression occupied an important place in daily and ceremonial life.

Conclusion

Deh Mari Sabri is recognized as an important archaeological settlement of the Harappan period, contributing valuable evidence for understanding

the material culture, ceramic traditions, and social life of the Indus Civilization in Sindh. The black-painted red pottery, terracotta bull figurine, and associated artifact fragments clearly demonstrate the site's Harappan affiliation. Consequently, Deh Mari Sabri occupies an important position in the archaeological study of settlement patterns and cultural development within the Indus Valley Civilization.

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Deesoi

Abstract

Deesoi is an important archaeological site located in Dadu District, Sindh, near the Deesoi Nai, approximately eight kilometers northeast of Thano Bula Khan. The site is characterized by a rugged and uneven landscape, with stone flakes and archaeological debris scattered across the surface. Material remains recovered from the site include utility pottery, terracotta and copper bangles, a stone spindle whorl, fragments of miniature terracotta carts, and both circular and quadrangular terracotta cakes. According to the archaeological assessments of N. G. Majumdar and Flem, the site belongs to the Harappan phase of the Indus Civilization.

Geographical Location and Archaeological Context

Deesoi is situated in Dadu District, approximately eight kilometers northeast of Thano Bula Khan, near the Deesoi Nai (seasonal stream). The site

occupies a geographically significant position within the archaeological landscape of western Sindh, an area containing numerous settlements associated with the Bronze Age and the Indus Civilization.

The settlement is characterized by a rugged terrain, with stone chips, lithic debris, and archaeological materials widely scattered across the site. Such surface remains indicate prolonged human activity and suggest that the settlement may have functioned as an active habitation or craft-related locality during the Harappan period.

Material Culture and Archaeological Discoveries

Archaeological materials recovered from Deesoi provide important insight into the material culture and daily life of its inhabitants. Among the recovered artifacts are domestic utility vessels, terracotta pottery, copper bangles, and a stone spindle whorl, which may indicate textile-related activities and household production.

Excavators also recovered fragments of miniature terracotta carts, possibly used either as children's toys or symbolic objects. Such miniature carts are frequently encountered at Harappan sites and are considered important indicators of transportation

practices and cultural symbolism within the Indus Civilization.

In addition, archaeologists discovered approximately two hundred circular terracotta cakes and two quadrangular terracotta cakes at the site. Similar terracotta cakes have also been recovered from other archaeological locations in the Thano Bula Khan region, suggesting regional continuity in material culture and possibly standardized utilitarian or ritual practices.

Harappan Cultural Affiliation

According to the interpretations of archaeologists N. G. Majumdar and Flem, Deesoi belongs to the Harappan phase of the Indus Civilization. The nature of the artifacts, including pottery traditions, ornaments, and terracotta objects, strongly supports this classification.

The recovered material demonstrates close cultural parallels with other Harappan settlements in Sindh and indicates that Deesoi formed part of a wider regional network of settlements linked through shared artistic traditions, craft production, and social interaction.

Conclusion

Deesoi represents an important Harappan archaeological settlement in Dadu District and contributes valuable evidence for understanding settlement patterns, material culture, and everyday life in prehistoric Sindh. The discovery of pottery, ornaments, terracotta carts, spindle whorls, and terracotta cakes highlights the technological and cultural sophistication of the site's inhabitants. Its affiliation with the Harappan cultural horizon further underscores its archaeological significance within the broader framework of the Indus Civilization.

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Dehji Ji Tikri

Introduction

Dehji Ji Tikri is an important archaeological site located in *Chunairo Deh* in Khairpur District, Sindh. The site holds considerable significance for the study of the Indus Valley Civilization (IVC) as well as the earlier rural cultural phases that preceded urbanization. The site was discovered in 1938 by the archaeologist Waets (also cited as Wats), who identified and documented its archaeological importance. Due to its geographical setting, cultural layers, and recovered material remains, the site provides valuable insights into the developmental trajectory of the Indus Civilization.

Geographical Setting and Structural Features

Dehji Ji Tikri is situated upon a limestone hillock approximately 12 meters above the surrounding plain. The site is quadrangular in shape, suggesting that it once functioned as a planned settlement. The establishment of settlements on elevated ground during ancient times may have

been associated with defensive advantages, water management, and adaptation to environmental conditions.

Archaeological evidence indicates that several settlements of the Indus Valley Civilization were established on elevated areas for administrative and defensive purposes. Therefore, the topographical location of Dehji Ji Tikri may reflect aspects of social organization and urban planning characteristic of the period.

Cultural Layers and Civilizational Continuity

According to Waets' observations, the site contains approximately four to five cultural strata, indicating a long period of human occupation and settlement continuity. The uppermost layer belongs to the urban phase of the Indus Valley Civilization, while the lower layers are associated with an earlier rural cultural period.

This evidence is particularly important because it demonstrates that the Indus Civilization did not emerge suddenly but developed gradually through a process of social and cultural evolution. The transition from village-based settlements to urban civilization represents an important stage in human societal development. Such stratified archaeological deposits provide researchers with

essential information regarding settlement patterns, socio-economic structures, lifestyles, and technological advancements.

Archaeological Findings and Comparative Analysis

Material remains recovered from Dehji Ji Tikri exhibit similarities to artifacts discovered at the well-known site of Kot Diji in Sindh and the ancient site of Kalibangan in Rajasthan. These similarities are particularly evident in pottery styles, settlement patterns, and material culture.

Kot Diji is commonly associated with the Early Harappan Phase of the Indus Civilization, whereas Kalibangan is recognized as an important center of urban and agricultural organization. The discovery of comparable archaeological materials at Dehji Ji Tikri suggests the existence of cultural interactions, trade networks, and technological exchanges among Sindh, Rajasthan, and neighboring regions. Such evidence further highlights the extensive cultural network of the Indus Civilization.

Archaeological Significance

Dehji Ji Tikri represents an important archaeological site for understanding the

evolutionary stages of the Indus Valley Civilization. Its lower strata reflect early rural cultural traditions, whereas the upper layers demonstrate the emergence and development of urban civilization. Consequently, the site possesses considerable academic significance for studying social transformation, demographic expansion, and urban organization in ancient South Asia.

Furthermore, the similarities between Dehji Ji Tikri and sites such as Kot Diji and Kalibangan provide opportunities for further research into regional interaction systems and cultural continuity within the broader framework of the Indus Civilization. Future excavations and scientific investigations may reveal additional information about the site's historical and archaeological importance.

Conclusion

Dehji Ji Tikri, located in Khairpur District, is an important archaeological site with substantial relevance to the study of both the urban phase of the Indus Valley Civilization and the earlier rural cultural traditions that preceded it. The site’s cultural layers, geographical setting, and recovered artifacts indicate that the region served as a significant center of human occupation, cultural evolution, and regional interaction in antiquity. Further scholarly research and

archaeological investigation at Dehji Ji Tikri are essential for enhancing our understanding of the broader civilizational framework of the Indus Valley Civilization.

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Desalpar

Introduction

The Indus Valley Civilization is one of the oldest urban civilizations in the world. Its geographical extent was not limited to present-day Sindh alone; rather, its remains spread across Punjab, Balochistan, Haryana, Rajasthan, Gujarat, and certain regions of Afghanistan. The civilization's urban planning, trade system, artistic craftsmanship, social organization, and architectural advancement place it among the most advanced civilizations of the ancient world. While several major sites associated with the Indus Civilization, such as Harappa and Mohenjo-daro, are globally renowned, many smaller and medium-sized sites are equally significant for understanding the regional diversity and cultural evolution of this civilization. Desalpar (Desalpar Gunthli) is one such important archaeological site.

Desalpar Gunthli, located in the Nakhtrana Taluka of Kutch District in the Indian state of Gujarat, is an archaeological site associated with the Indus

Valley Civilization. Although this site is not as large as Mohenjo-daro or Dholavira, its architectural features, strong fortifications, seals, pottery, and evidence of urban planning make it an important regional center of the Indus Civilization.

Geographical Location and Natural Environment

Desalpar Gunthli is situated in the Kutch District of Gujarat, approximately 25 kilometers from Bhuj city. The site was established on the northern bank of the Bamu-Chela stream, a tributary of the Dhrud River. In ancient times, the availability of water was considered an essential condition for urban settlement; therefore, it is likely that Desalpar was established near this water system to support agriculture and trade.

Today, the region is semi-arid in nature; however, during ancient times, it may have enjoyed a more favorable climate and richer water resources, which would have supported agriculture, pastoralism, and commercial activity.

Discovery and Historical Identification

Knowledge of the remains at Desalpar has existed locally for a long time. According to local traditions, villagers frequently discovered ancient pottery fragments, coins, and occasionally

valuable objects while digging the land. In 1828, records from the British colonial period mention the site, describing ancient walls, ruins, and traces of religious structures.

The old fortification walls, although now heavily eroded, still provide a sense of the original settlement boundaries. The perimeter of these walls has been estimated at approximately 2,250 yards, forming an oblong or rectangular shape.

Archaeological Excavations and the 1963 Campaign

The most important phase of scientific archaeological excavation at Desalpar began in 1963, when the Archaeological Survey of India (ASI) carried out systematic excavations at the site. These excavations revealed that Desalpar was an organized Harappan settlement equipped with a strong defensive system, residential buildings, and complex central architectural structures.

The archaeological evidence demonstrated that Desalpar was not merely an ordinary village but rather a protected urban center characterized by social organization and planned settlement patterns.

Fortifications and Urban Planning

One of the most significant characteristics of Desalpar is its strong stone fortification. Excavations revealed that the fort wall had a base approximately 4 meters wide, while its height ranged between 2 and 5 meters. Such a substantial defensive structure suggests that the inhabitants were concerned with external threats, protection of goods, or political rivalries.

Within the settlement, residential houses were constructed adjacent to the fortification walls, while the central area contained large structural complexes with strong foundations, thick walls, and spacious rooms. These buildings may have served administrative, religious, or commercial functions.

This urban arrangement bears similarities to other Indus Civilization cities, such as Mohenjo-daro and Dholavira, where urban planning and defensive organization played important roles.

Pottery and Harappan Cultural Materials

Numerous examples of standard Harappan pottery were recovered from Desalpar, serving as important evidence of the cultural unity of the Indus Civilization. Particularly notable is a fine

grey ware decorated with bluish-green painted lines.

This pottery closely resembles ceramics found at Mohenjo-daro and has been described by some researchers as “glazed ware.” Such similarities suggest cultural interaction and possibly trade relations between Desalpar and major urban centers in Sindh.

Seals and the Indus Script

Three different types of seals were discovered at Desalpar, further emphasizing the site’s civilizational significance. These seals were made from steatite, copper, and terracotta.

The seals bore inscriptions in the Indus script, which remains one of the greatest unresolved mysteries in archaeology. The presence of script suggests that Desalpar functioned as an organized urban center connected to systems of trade, administration, or identity marking.

The use of different materials for seal production also demonstrates a high level of craftsmanship and metallurgical knowledge.

Social and Economic Life

Based on archaeological evidence, it can be inferred that the inhabitants of Desalpar engaged in agriculture, animal husbandry, craftsmanship, and trade. The strategic coastal and commercial location of Kutch likely contributed to the site's role in regional exchange networks.

It is possible that the people of Desalpar maintained trade relations with Mohenjo-daro, Lothal, Dholavira, and other urban centers of the Indus Civilization. Similar pottery styles, seals, and urban features support this interpretation.

Local Traditions, the Sammas, and the Seven Sands

The history of Desalpar is not confined solely to the Harappan period but is also connected with medieval local traditions. According to local legends, rulers known as the "Seven Sands" once governed the region before being defeated by the Sammas from Sindh.

One well-known tradition narrates how two Samma brothers, Mod and Mandi, cleverly captured the fort. According to the story, armed men were hidden beneath carts of grass and smuggled into the city. Although such narratives may not always be historically verifiable, they

remain important for understanding the political memory and cultural heritage of the region.

Comparative Analysis with Mohenjo-daro and Other Harappan Sites

Although Desalpar is relatively small in size (approximately 130 × 100 meters), several of its architectural features reflect similarities with larger centers such as Mohenjo-daro and Dholavira.

Feature	Desalpar	Mohenjo-daro
Fortification	Strong stone walls	Brick defensive structures
Seals	Present	Found in large numbers
Indus Script	Present	Extensive
Pottery	Harappan style	Standardized Harappan pottery
Urban Layout	Organized	Highly organized

This comparison demonstrates that Desalpar represented a regional yet systematically organized branch of the broader Indus Civilization.

Scholarly Importance

Desalpar is significant for several reasons:

1. It provides evidence for the spread of the Indus Civilization into the Kutch region.
2. Its strong fortification reflects defensive planning and political organization.
3. The presence of seals and script indicates administrative and commercial activity.
4. Pottery similarities demonstrate cultural connections between Sindh and Gujarat.
5. The site serves as an important source for understanding the regional diversity of the Indus Civilization.

Conclusion

Desalpar Gunthli is an important yet comparatively lesser-known archaeological site of the Indus Valley Civilization. It provides valuable insights into the expansion of Harappan culture in the Kutch region, urban planning, defensive architecture, and cultural interaction. The discoveries made during the 1963 excavations confirmed that the site was not only an organized settlement but also held commercial, cultural, and administrative significance.

Further scientific investigations at Desalpar may reveal new dimensions regarding regional variations of the Indus Civilization, maritime trade,

and cultural links between Sindh and Kutch. Therefore, the site remains highly important for future archaeological research.

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Dhal

The ancient archaeological remains of Dhal Buthi are situated to the west of the Lakki Hills in Dadu District. The site is characterized by a triangular layout, with its narrowest section forming the northern extremity. At this northern point, the terrain rises into a conical mound, indicating a distinctive topographical feature that may have held archaeological significance.

The site is associated with both the rural cultural phase of the Indus region and the later urban phase of the Indus Valley Civilization. Archaeologist Nani Gopal Majumdar discovered fine pottery associated with the Amri cultural phase at the site. However, no visible remains of structures from the Bronze Age were identified on the summit of the mound. This suggests that while the settlement retained continuity from an earlier rural phase, its architectural evidence from later periods remains limited or obscured.

Artifacts recovered from Dhal Buthi include painted pottery, terracotta bangles, dishes-on-

stand, and perforated vessels. These material remains are significant indicators of cultural practices, craftsmanship, and domestic life during different occupational phases of the settlement. The presence of decorated ceramics further reflects the artistic traditions and technological capabilities of the inhabitants.

Majumdar also observed foundation stones of walls in the eastern half of the site, indicating traces of permanent architectural activity. Meanwhile, archaeologist H. Fleming reported evidence of a circular stone structure on the western side of the mound. Such remains may point toward specialized construction techniques or functional architectural spaces within the settlement.

Dhal Buthi is therefore considered an important archaeological site for understanding the transition from rural cultural traditions to the urban phase of the Indus Valley Civilization in Sindh. The site offers valuable evidence regarding settlement continuity, architectural development, and material culture in prehistoric Sindh.

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Dhalani Jo Kot

Introduction

Dhalani Jo Kot is one of the significant archaeological sites of Sindh, located on the bank of the Baran Nai in Dadu District, approximately 6 kilometers northeast of Jahangara. The site provides valuable information about prehistoric human settlement in the region. The archaeologist Nani Gopal Majumdar (N. G. Majumdar), after conducting a survey and examination of the site, identified it as belonging to the rural cultural phase associated with the Amri Culture.

Geographical Setting

Dhalani Jo Kot is situated along the Baran Nai, an important seasonal stream originating from the Kirthar Mountains. This geographical location would have provided ancient inhabitants with access to water, agricultural opportunities, and resources for pastoral activities. Like many

prehistoric settlements in Sindh, the site was established near a water source, reflecting the essential requirements of early human communities.

Archaeological Evidence

According to Majumdar's investigations, the pottery recovered from Dhalani Jo Kot consists predominantly of neckless vessels. The form and style of these ceramics closely resemble pottery discovered in the earliest occupational layers of Amri. This similarity indicates that the site belongs to the early phase of the Amri Culture, which represents a rural society that flourished before the emergence of the urban centers of the Indus Civilization.

The pottery's shape, manufacturing techniques, and stylistic characteristics provide important insights into the daily life, economic activities, and cultural traditions of the inhabitants. These neckless vessels were likely used for storing food, water, or other household necessities.

Relationship with the Amri Culture

Dhalani Jo Kot is among the sites that contribute to our understanding of the development and spread of the Amri Culture. The Amri Culture was

one of the earliest agricultural and rural traditions of Sindh and played a foundational role in the later emergence of the urban civilization of the Indus Valley. The archaeological remains from Dhalani Jo Kot confirm that the Dadu region and the foothills of the Kirthar Range were important centers of Amri cultural activity.

Conclusion

Dhalani Jo Kot is an important archaeological site in Dadu District that offers valuable evidence regarding the rural cultures of prehistoric Sindh. The pottery recovered from the site and its close resemblance to ceramics from the early levels of Amri demonstrate that it was an important center of early agricultural settlement. Further systematic excavations could yield additional information about the ancient history and cultural development of the region.

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Dholavira

Introduction

The Indus Valley Civilization (IVC) is one of the world's oldest urban civilizations, flourishing approximately between 3300 BCE and 1300 BCE across extensive regions of South Asia. This civilization holds a distinguished position among ancient cultures due to its remarkable urban planning, drainage systems, trade organization, craftsmanship, standardized weights and measures, and social administration. Major archaeological sites of this civilization are distributed across present-day Pakistan and India, among which Mohenjo-daro, Harappa, Rakhigarhi, Lothal, Kalibangan, and Dholavira occupy exceptional significance.

Dholavira is one of the most unique and important urban centers of the Indus Civilization, distinguished by its sophisticated water management system, advanced stone architecture, fortified urban planning, inscriptions, and commercial importance. This site not only

demonstrates the engineering and architectural excellence of the Harappans but also represents a remarkable example of human adaptation to challenging environmental conditions.

Geographical Location and Environmental Context

Dholavira is situated on **Khadir Bet Island** in the **Kutch District of Gujarat, India**, within the arid expanse of the **Great Rann of Kutch**. The site lies approximately at **23°53’13” North latitude** and **70°13’05” East longitude**, nearly 370 kilometers northwest of Ahmedabad.

The region is characterized by a semi-arid climate, receiving limited annual rainfall and experiencing significant temperature fluctuations. To the north of Dholavira flowed the seasonal stream **Mansar**, while **Manhar** lay to its south. Despite these limited water resources, the inhabitants developed an exceptionally advanced water conservation system, considered one of the finest engineering achievements of the Indus Civilization.

From an environmental perspective, the location of Dholavira was strategically chosen. The site stood close to maritime routes, facilitating trade with the Arabian Sea, Oman, and Mesopotamia.

Furthermore, its elevated terrain and access to seasonal water channels made it advantageous for both defense and water procurement.

Discovery and History of Archaeological Excavation

The scientific identification of Dholavira occurred during **1967–68**, when archaeologist **J. P. Joshi** of the Archaeological Survey of India (ASI) discovered the site. Initial surveys revealed Harappan pottery, structural remains, and large stone constructions, indicating the existence of an important urban center.

Systematic excavations were conducted between **1990 and 2005** under the supervision of archaeologist **R. S. Bisht**. These excavations exposed the city's sophisticated urban planning, reservoirs, fortifications, residential sectors, commercial areas, inscriptions, and ritual features.

Archaeologists excavated approximately **47 hectares**, although the total settlement covered more than **100 hectares**. In recent years, advanced technologies such as drone mapping, **LiDAR**, and **Ground Penetrating Radar (GPR)** have been employed for further documentation and analysis of the site.

Chronology and Developmental Phases

Dholavira remained inhabited approximately from **3000 BCE to 1500 BCE**. Archaeologist R. S. Bisht divided the settlement into **seven developmental stages**.

Phase I (3000–2650 BCE)

This represented the Early Harappan period, during which a small village-like settlement emerged. Structures were relatively simple and mainly built with mud and stone.

Phases II–III (2650–2500 BCE)

During this period, population expansion occurred, defensive walls were constructed, reservoirs were established, and the city's organizational structure improved significantly.

Phases IV–V (2500–2000 BCE)

This was the zenith of Dholavira's development. The city achieved its highest level of prosperity in trade, architecture, hydraulic engineering, and administrative organization.

Phases VI–VII (1950–1450 BCE)

This period marked gradual decline. Population decreased, urban systems weakened, and eventually the city was abandoned.

Urban Planning and Architecture

Dholavira's urban planning was highly systematic and carefully organized. The city was divided into three principal sectors:

1. **The Citadel** — reserved for rulers, elites, and administrative authorities
2. **The Middle Town** — occupied by artisans, merchants, and traders
3. **The Lower Town** — inhabited by the general population

This tripartite division reflects clear evidence of social stratification and organized governance.

Unlike many other Harappan cities, Dholavira is particularly notable for its extensive use of **stone architecture**, whereas Mohenjo-daro and Harappa relied primarily on baked bricks. Massive fortifications, monumental gateways, multi-storied buildings, and defensive bastions collectively illustrate the city's architectural sophistication and concern for security.

The Sophisticated Water Management System

One of the most remarkable features of Dholavira is its **water conservation and storage system**, regarded as one of the finest examples of hydraulic engineering in the ancient world.

The city possessed approximately **sixteen major reservoirs**, carved into stone and strategically designed to collect and preserve water. Rainwater, seasonal streams, and artificially directed channels supplied these reservoirs.

To maximize water conservation, the inhabitants employed:

- Check dams
- Drainage channels
- Stone stairways leading to reservoirs
- Sediment-control mechanisms

This hydraulic system fulfilled urban demands while also supporting agriculture and economic activity. Archaeologists regard it as such an advanced model that it continues to inspire contemporary discussions regarding water management in arid environments.

Inscriptions, Seals, and Artifacts

Dholavira yielded the famous **Harappan inscription board**, containing approximately **ten symbols**, considered one of the largest public displays of Indus script discovered to date.

Recovered artifacts include:

- Seals
- Beads
- Pottery vessels
- Copper implements
- Shell ornaments
- Terracotta figurines of humans and animals

These materials provide valuable insight into trade, craftsmanship, religious symbolism, and everyday life within the city.

Economic and Trade Systems

Dholavira functioned as one of the major commercial centers of the Indus Civilization. The city maintained trade relations with:

- Mesopotamia
- Oman
- The Iranian Plateau
- Coastal regions of the Arabian Sea

Trade commodities included:

- Carnelian beads
- Shell ornaments
- Cotton textiles
- Timber
- Precious and semi-precious stones

The presence of standardized weights and measures demonstrates an organized and regulated economic system.

Social and Cultural Life

Dholavira's society exhibited clear social organization, reflected in the spatial division of the city. Elite groups occupied the citadel, while common inhabitants resided in the lower sectors.

Culturally, evidence such as:

- Ornamentation and jewelry
- Decorated pottery
- Symbolic motifs
- Ritual structures and memorials

indicates the existence of a sophisticated and culturally developed society.

Motifs of pipal leaves, animal symbolism, and possible ritual architecture point toward the

spiritual and symbolic dimensions of Harappan belief systems.

Causes of Decline: An Archaeological Analysis

Various theories have been proposed regarding the decline of Dholavira; however, modern scholarship generally identifies **climatic change and prolonged drought** as the principal causes.

After approximately **2000 BCE**:

- Rainfall declined,
- Seasonal rivers weakened or dried up,
- Agricultural productivity diminished,
- Trade networks deteriorated.

Importantly, no archaeological evidence suggests invasion or large-scale warfare as the cause of the city's abandonment.

Comparative Analysis with Other Indus Cities

A comparison between Dholavira and other major Harappan centers such as Mohenjo-daro, Harappa, and Lothal demonstrates that each city developed distinctive regional characteristics according to local environmental conditions.

Mohenjo-daro flourished as a riverine city, whereas Dholavira represented an extraordinary example of water conservation in an arid environment. Harappa functioned prominently as a trade center, while Dholavira appears especially distinguished for its hydraulic engineering and fortified urban planning.

Modern Significance and Global Recognition

In **2021**, Dholavira was inscribed on the **UNESCO World Heritage List**, recognizing its outstanding universal value and global archaeological importance.

Today, activities such as:

- Conservation and restoration efforts,
- Digital documentation,
- Tourism management, and
- Environmental monitoring

continue to preserve the site for future generations.

Conclusion

Dholavira was an extraordinary urban center of the Indus Valley Civilization, distinguished by its sophisticated urban planning, advanced water

management systems, trade networks, architectural achievements, and cultural organization. The site demonstrates that the people of the Indus Civilization not only maintained highly organized urban lives but also possessed exceptional skills for adapting to difficult environmental conditions.

The excavation of Dholavira has significantly enriched scholarly understanding of the economic, social, religious, and cultural foundations of ancient Harappan society. Therefore, this site represents not merely a relic of the past but a lasting testimony to human ingenuity, technological skill, and environmental wisdom.

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Drib Dithri

Introduction

The Indus Valley Civilization (IVC) was one of the world's earliest urban civilizations, renowned for its systematic urban planning, trade networks, economic organization, architectural achievements, and standardized material culture. Numerous important archaeological sites associated with this civilization have been discovered across Sindh. While some sites, such as Mohenjo-daro, have achieved international recognition, others remain comparatively lesser-known despite their considerable historical significance. Drib Dithri is one such archaeological site, identified as an important settlement belonging to the urban phase of the Indus Valley Civilization.

The archaeological remains of Drib Dithri were discovered in Sukkur District, Sindh, where archaeologists have associated the site with the urban period of the Indus Civilization. The site holds significance not only because of its

geographical location but also due to its architectural features, distinctive well construction, and its relationship with neighboring contemporary settlements.

Geographical Location and Setting of the Site

Drib Dithri is situated on the northeastern edge of Sukkur city, along the right bank of the dried channel of the Ghaggar–Hakra River. The archaeological site lies between the villages of Yaro Lund and Sahib Khan Lund. This geographical setting suggests that in ancient times the settlement may have been connected with an important riverine system that played a fundamental role in human habitation, agriculture, and trade.

Many scholars believe that the Ghaggar–Hakra River once functioned as an active river system, along whose banks numerous settlements of the Indus Civilization flourished. The presence of Drib Dithri further supports the argument that the availability of water resources and fertile lands encouraged the development of settlements in this region.

Area and Surface Characteristics of the Site

The mound of Drib Dithri stands approximately 100 feet above the surrounding terrain, while its surface area is estimated to cover nearly half a square mile. The surface of the mound is extensively covered with potsherds, providing clear archaeological evidence of prolonged human occupation and cultural activity.

The abundance of pottery fragments indicates that the settlement was not merely a temporary habitation but rather a permanent urban or semi-urban community. Such ceramic remains are generally associated with domestic usage, grain storage, water management, and commercial activities.

Research further suggests that a substantial portion of the settlement has gradually become buried beneath layers of sand, making it difficult to determine the complete boundaries and structural composition of the site. Similar to many archaeological sites in Sindh, environmental transformations and shifts in river courses may have contributed to the partial destruction and burial of the settlement.

The Well and Architectural Features

One of the most significant archaeological discoveries at Drib Dithri is a well unearthed from

the southeastern section of the settlement. The well was found buried approximately four feet below the present ground surface. Measuring nearly five feet in circumference, the structure provides valuable information regarding the water management practices of the settlement.

The construction of the well is particularly noteworthy, as each brick course consists of only nine bricks. These bricks are not uniform in texture or mould, suggesting that local materials may have been used alongside standardized construction methods.

The horizontally laid circular arrangement of the bricks, which presents a wing-like appearance when viewed from the side, represents a distinctive architectural style. This construction technique differs considerably from the wells excavated at Mohenjo-daro, where the architectural design appears more standardized and systematic. Such differences may indicate the existence of regional architectural traditions within the broader framework of the Indus Civilization.

Nearby Archaeological Sites and Regional Connections

Approximately four miles northeast of Drib Dithri lies another important archaeological site of the Indus Civilization known as Wanjharot. The close proximity of these two settlements suggests the possibility that they formed part of a regional settlement network.

The urban centers of the Indus Civilization were characterized by interconnected systems of large and small settlements that facilitated trade, agricultural production, the movement of raw materials, and cultural interactions. It is plausible that Drib Dithri and Wanjharot were linked through such a regional system, maintaining economic and social relations with one another.

Conclusion

Drib Dithri represents an important yet relatively understudied archaeological site of the urban phase of the Indus Valley Civilization. Its geographical setting, association with the Ghaggar–Hakra River system, extensive surface area, abundance of pottery fragments, and distinctive well construction collectively contribute to its archaeological significance.

Further scientific excavation and investigation employing modern archaeological methods may provide deeper insights into regional settlement

patterns, architectural diversity, and water management systems of the Indus Civilization. In particular, comparative studies with nearby sites such as Wanjharot may significantly enhance our understanding of the ancient urban landscape of this region.

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Farmana

Introduction

The Indus Valley Civilization is one of the oldest urban civilizations in the world, which flourished approximately from 3300 BCE to 1300 BCE across a vast region of South Asia. Major urban centers of this civilization such as Mohenjo-daro, Harappa, Dholavira, Rakhigarhi, and Kalibangan have long remained the focus of scholarly research. However, during recent decades, several new sites have also emerged, which have played an important role in understanding the social, cultural, and economic structure of the Indus Civilization. Among these significant archaeological sites is **Farmana**, located in the Rohtak district of the northern Indian state of Haryana.

Farmana has gained particular importance because of the discovery of an extensive cemetery alongside its habitation settlement, where numerous human skeletons of adults and children have been found. This site belongs to the Mature

Harappan Phase (approximately 2500–2000 BCE). The remains discovered from Farmana not only provide significant information regarding lifestyle, social organization, trade, and food practices, but also raise new questions concerning burial customs, social stratification, and inter-regional relationships.

Geographical Location and Natural Environment

Farmana, also known as **Farmana Khas** or **Daksh Khera**, is situated in the Meham block of Rohtak district in the state of Haryana. The site lies approximately 15 kilometers from the Rohtak–Hisar highway and around 60 kilometers from Delhi. From an archaeological perspective, this region is highly significant because it lies close to the eastern limits of the Indus Valley Civilization, where river systems, fertile lands, and ancient trade routes once existed.

The site of Farmana spreads over approximately **18.5 hectares**, making it a medium-sized urban or semi-urban settlement. The geographical setting of the area indicates that Farmana was established on agriculturally fertile land, where seasonal water resources and favorable conditions for cultivation were available. The presence of fertile plains likely formed the basis of the settlement's economic stability.

Discovery and History of Archaeological Excavations

The academic significance of Farmana became prominent when systematic archaeological excavations began in 2006. The project was supervised by the renowned Indian archaeologist **Vasant Shinde**, who was affiliated with the **Deccan College Post-Graduate and Research Institute, Pune**. The **Research Institute for Humanity and Nature, Kyoto, Japan**, provided financial and technical support for the project, while **Maharshi Dayanand University, Rohtak**, and the **Archaeological Survey of India (ASI)** also participated as partner institutions.

A notable feature of the Farmana excavations was the discovery of separate habitation and cemetery areas, located approximately one kilometer apart. This arrangement provides important clues regarding urban planning and the religious or social concepts of the Indus Civilization.

Archaeological Importance of Farmana

Farmana is important primarily for two reasons: first, the site belongs to the Mature Harappan period; and second, it contains a large cemetery, which provides extremely valuable material for

detailed research into human society, health, diet, death rituals, and social distinctions.

Excavations at the site have demonstrated that the Indus Civilization was not limited solely to major urban centers, but also included a broad network of organized medium-sized settlements that functioned as commercial, agricultural, and cultural centers.

The evidence from Farmana's habitation site indicates that its society possessed a clear tradition of urban organization, settlement planning, and craftsmanship. Such arrangements bear resemblance to other major centers of the Indus Civilization, such as Mohenjo-daro and Harappa.

Settlement Structure and Urban Planning

Excavations have revealed that Farmana possessed a systematically organized settlement. Straight and planned roads were discovered, with houses constructed on both sides. Such urban planning suggests that the inhabitants of Farmana had a sophisticated understanding of architectural organization.

Four residential complexes have been identified at the site, one of which has been fully excavated.

This residential section contained approximately **26 rooms**, **3 to 4 kitchens**, **an equal number of bathrooms**, and a large **central courtyard**. This fact not only indicates residential comfort and sanitation systems but also reflects the collective nature of social life.

The presence of bathrooms and carefully planned houses demonstrates the advanced sanitation system of the Indus Civilization, which is regarded as more organized than that of many other ancient civilizations of the world.

Material Culture and Artifacts

The artifacts recovered from Farmana provide important information regarding daily life, craftsmanship, trade, and social activities within the Indus Civilization. Excavations have yielded **terracotta toys**, **whistles**, **toy wheels**, **seals**, **copper bangles**, **small gold ornaments**, and a substantial quantity of **pottery fragments**.

Terracotta toys indicate not only the presence of children but also reveal the cultural and recreational aspects of society. The discovery of seals suggests trade and administrative activities, since seals in the Indus Civilization were commonly used for identifying goods and maintaining commercial transactions.

Copper and gold ornaments indicate the possibility of social differentiation within society. The presence of such materials suggests that some individuals possessed greater economic prosperity than others.

The pottery discovered at Farmana closely resembles that of the Mature Harappan cultural tradition in terms of shape, decoration, and use. In some cases, black painted designs over red pottery have also been observed, which form an important component of Indus artistic expression.

Early Indicators of Economic Life

The artifacts recovered from the habitation area of Farmana suggest that the local economy was multi-dimensional. Agriculture was likely the primary economic activity, while craftsmanship, metallurgy, jewelry production, and trade also played significant roles. The presence of ornaments made from conch shell indicates that Farmana maintained trade relations with the coastal regions of Gujarat, from where marine shells were obtained.

This evidence demonstrates the extent of the trade networks of the Indus Civilization, through which raw materials were transported from one region to another.

The Cemetery of Farmana: An Important Source for the Study of Death and Society

The most remarkable feature of Farmana is its cemetery, which belongs to the Mature Harappan phase of the Indus Civilization. Located approximately one kilometer away from the habitation settlement, this cemetery provides important information regarding the burial customs, social stratification, health, diet, population mobility, and family structure of the Indus Valley Civilization.

Approximately **70 burials** have so far been discovered from this cemetery, dating to around **2500 BCE to 2000 BCE**. A comparison with other cemeteries of the Indus Civilization, such as Harappa, Kalibangan, and Rakhigarhi, demonstrates that while Farmana shares several similarities in funerary traditions, it also possesses some distinctive characteristics.

The existence of the cemetery at a separate location from the settlement serves as evidence that the inhabitants of Farmana consciously separated the spaces of life and death, which may have reflected religious, social, or sanitary considerations.

Analysis of Burial Customs

The majority of graves discovered at Farmana contain bodies oriented in a **northwest–southeast direction**, while some burials were also found aligned **north–south** and **northeast–southwest**.

Such diversity in burial orientations suggests that there may not have been a completely uniform religious principle governing funerary practices within the Indus Civilization, or alternatively, that burial customs evolved over time. The arrangement of graves also indicates that burial procedures were likely carried out according to specific social and cultural traditions.

Several graves contained **pottery vessels, ornaments, bangles, seals, and other objects**, which were probably buried with the deceased under beliefs connected to the afterlife or spiritual concepts. Such traditions suggest that the inhabitants of Farmana may have held certain beliefs regarding life after death, although definitive religious interpretation remains difficult because the Indus script has not yet been deciphered.

The Burial of a Wealthy Woman: Evidence of Social Differentiation

Among the most significant burials discovered at Farmana is that of a **middle-aged woman**, which

has attracted considerable archaeological attention. Alongside her skeletal remains, archaeologists discovered:

- Three shell bangles
- Two copper bangles
- Copper earrings
- Beads
- Foot ornaments

This type of burial suggests the existence of economic or social differentiation within Farmana society. It is possible that this woman belonged to a prosperous or influential social class. The abundance of ornaments may not only reflect economic standing but could also symbolize family prestige or social rank.

Such burials also raise the possibility that women may have occupied an important social position within Farmana society, as the placement of valuable objects in female graves may signify honor or status.

Biological Remains and Human Health

The study of human skeletal remains recovered from Farmana has yielded important information regarding the physical health, diet, age, diseases, and social life of its inhabitants.

Scientists conducted analyses of human teeth, bones, and chemical elements preserved in skeletal remains to understand patterns of diet, migration, and environmental adaptation. The structural and chemical composition of teeth suggests that some inhabitants of Farmana may have migrated from other regions before settling at the site.

DNA Research: An Unsuccessful Yet Important Attempt

In 2009, archaeologist **Vasant Shinde** announced plans to conduct modern scientific analyses on the human skeletal remains recovered from Farmana, including:

- DNA analysis
- Botanical studies
- Trace element analysis to understand dietary patterns

The aim of this research was to investigate the genetic origins, dietary habits, and migration patterns of the Harappan people. However, attempts to extract DNA from the skeletal remains were unsuccessful because the bones had been contaminated due to prolonged exposure to environmental conditions and flooding.

Although the DNA project did not succeed, the effort remains an important example of integrating modern scientific methods into the biological study of the Indus Civilization.

Chemical Analysis of Teeth and Evidence of Migration

Scientific studies were conducted on approximately **4,000-year-old teeth** recovered from Farmana and Harappa, involving the analysis of **lead and strontium isotope ratios**. This technique is used to determine whether an individual spent their life in their place of birth or migrated elsewhere during adulthood.

The findings revealed that many individuals spent their childhood in rural areas but later migrated to urban settlements as adults. This conclusion is highly significant, as it indicates patterns of internal mobility within the Indus Civilization.

It suggests that settlements such as Farmana likely attracted people because of economic opportunities or trade-related activities.

Diet and Agriculture: Botanical Evidence

The study of **starch grains (microscopic plant remains)** recovered from pottery vessels, stone

tools, and human dental calculus at Farmana has produced important new evidence regarding Harappan food practices.

Research suggests that the inhabitants of Farmana consumed:

Clearly Confirmed Crops:

- Wheat
- Barley
- Millet
- Gram
- Garlic

In addition, scientific analysis has also revealed the use of plants whose seeds were not recovered directly through excavation, including:

- Horsegram
- Eggplant
- Mango
- Ginger
- Turmeric
- Sedge plants

These findings provide extremely important information regarding the dietary diversity and agricultural sophistication of the Indus Civilization.

One of the World's Earliest Spice-Based Culinary Traditions?

The discovery of starch grains of **ginger and turmeric** at Farmana is regarded as a highly significant archaeological finding. Traces of **cooked ginger and turmeric** found inside ceramic vessels and on the teeth of skeletons recovered from burial sites have led several scholars to argue that the inhabitants of Farmana may have practiced one of the earliest known traditions of organized spice-based cooking in human history.

This conclusion offers a new perspective on the culinary culture of the Indus Civilization, suggesting that spices may have been used not only for flavor but also for medicinal and health-related purposes.

Evidence of Inter-Regional Marriages and Social Connections

One of the more intriguing outcomes of recent studies at Farmana is the suggestion that the Harappan population practiced **inter-regional marriages**, likely for purposes of trade and social alliance.

Chemical analyses indicate that some individuals possessed biological characteristics differing from

those of the local population, raising the possibility that people from distant regions became integrated into Farmana society through marriage.

Such evidence suggests that the social structure of the Indus Civilization was not entirely isolated on regional or ethnic lines, but rather involved interactions among people from multiple areas.

Trade Relations and Connections with Gujarat

Excavations at Farmana have yielded **conch shell bangles and beads**, originating from the coastal regions of **Gujarat**. This discovery is highly significant, as Farmana is located far from the sea.

This evidence confirms the existence of an extensive trade network within the Indus Civilization, through which raw materials from coastal regions were transported to inland settlements.

Social Organization of Farmana: An Organized Urban Society

The evidence recovered from Farmana, including settlement planning, house structures, cemetery remains, ornaments, and trade-related materials, suggests that the site represented an organized

and socially structured community. Although Farmana was not a large urban center like Mohenjo-daro or Harappa, it clearly possessed many of the fundamental characteristics of urban life.

The systematic arrangement of houses, central courtyards, bathrooms, and kitchens suggests that social life was organized around family units and possibly collective residence patterns. The presence of numerous rooms within a single residential complex raises the possibility that extended families or related kin groups may have lived together.

The discovery of valuable ornaments, fragments of gold, copper bangles, and shell jewelry further indicates the existence of economic differentiation within society. Certain individuals likely had greater access to resources, possibly due to trade, craftsmanship, religious influence, or family status.

However, no clear evidence has yet emerged from Farmana indicating a rigid class hierarchy comparable to the royal societies of Egypt or Mesopotamia. This observation strengthens the long-standing argument that the Indus Civilization may have maintained a comparatively balanced social structure.

Religious and Spiritual Possibilities

No major temple, monumental religious structure, or palace associated with rulers has yet been discovered at Farmana, a characteristic that aligns with many other sites of the Indus Civilization. Nevertheless, burial customs provide indirect clues regarding religious or spiritual beliefs.

The placement of daily-use items, pottery vessels, ornaments, and personal belongings in graves suggests that the people of Farmana may have believed in some form of afterlife or spiritual continuity.

Some scholars propose that the inhabitants of the Indus Civilization practiced belief systems connected with fertility, water, nature, and household symbolism, although definitive conclusions remain difficult because the Indus script has not yet been deciphered.

The burial of women accompanied by ornaments also raises questions regarding whether women occupied special spiritual or social positions in Farmana society. However, further evidence is necessary before firm conclusions can be established.

Economic Life and Trade Networks: A Comprehensive Assessment

The economy of Farmana was likely based primarily on agriculture. Botanical evidence suggests that local inhabitants cultivated wheat, barley, millet, and pulses. In addition, vegetables, fruits, and spices formed part of the local diet, reflecting a relatively sophisticated food system for the period.

The discovery of shell ornaments originating from Gujarat indicates participation in an extensive trade network. It is possible that Farmana functioned as an important intermediary settlement linking inland northern India with major urban centers of the Indus Civilization to the west.

Evidence from seals, metal artifacts, and craft production indicates that the inhabitants of Farmana were not solely dependent upon agricultural production but were also engaged in pottery-making, jewelry production, metallurgy, and other forms of specialized craftsmanship.

Climate Change and the Decline of Farmana

Several theories have been proposed regarding the decline of the Indus Valley Civilization, one of

the most prominent being **climate change**. In the case of Farmana, researchers have expressed interest in conducting geological studies of surrounding lakes and sediment deposits to determine the environmental conditions that prevailed during the Harappan period.

Some scholars argue that changes in river systems, declining rainfall, drought, and reduced agricultural productivity contributed to the weakening of urban settlements within the Indus Civilization.

If agricultural centers such as Farmana experienced water shortages, this would likely have had serious consequences for the local economy, food supply, and demographic stability.

However, modern scholarship increasingly suggests that the Indus Civilization did not collapse suddenly but instead gradually lost its urban character, transforming into smaller agricultural communities over time.

Farmana's Place within the Indus Valley Civilization

Farmana occupies an important position in the study of the Indus Civilization for several reasons:

1. Cemetery Research

The cemetery at Farmana provides crucial evidence concerning human biology, burial customs, social differentiation, and health practices within the Indus Civilization.

2. New Discoveries Regarding Diet

Evidence for the use of ginger and turmeric gives Farmana a distinctive position in studies of ancient food traditions and culinary history.

3. Population Mobility

Chemical analyses of teeth have revealed important evidence regarding urban migration and population movement within the Harappan world.

4. Inter-Regional Marriages

The presence of individuals originating from different regions highlights the complexity of social relationships and trade-based alliances.

5. Trade Networks

Trade in shell materials from Gujarat demonstrates the geographical reach and sophistication of the Harappan economic system.

Conclusion

Farmana is an exceptionally important archaeological site of the Indus Valley Civilization, providing significant information not only about urban life, settlement organization, and economic activities but also about human society, burial customs, diet, health, trade, and cultural interactions.

The particular significance of Farmana lies in its cemetery evidence, which allows scholars to investigate aspects of daily life and mortuary practices in considerable detail. The evidence for the use of ginger and turmeric offers new perspectives on ancient culinary traditions, while chemical studies of teeth demonstrate that the Harappan population was dynamic and connected through inter-regional interactions rather than socially isolated.

In summary, Farmana demonstrates that the strength of the Indus Civilization was not based solely upon major cities but also upon numerous medium-sized and smaller organized settlements that collectively formed an extensive, interconnected, and highly developed cultural system.

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Garho Bhiro

Abstract

The Indus Valley Civilization (IVC), also known as the Harappan Civilization (c. 2600–1900 BCE during its Mature Phase), is widely recognized for its sophisticated urban planning, craft specialization, standardized systems of production, and extensive intra- and interregional trade networks. While metropolitan centers such as Mohenjo-daro and Harappa have received substantial scholarly attention, smaller regional settlements played equally important roles in sustaining economic connectivity across diverse ecological and geographic zones. This study examines Garho Bhiro, an archaeological site located in present-day Mithi Taluka, Tharparkar District, Sindh, Pakistan. Excavated in 1972 under the supervision of archaeologist Muhammad Sharif, the site covers approximately 5–6 acres and rises nearly 25 feet above the surrounding plain.

Drawing upon available archaeological evidence—including ceramic typology, lithic assemblages, metallurgical remains, and settlement morphology—this article reassesses Garho Bhiro's role within the broader Harappan exchange system. Rather than interpreting the settlement as an isolated desert habitation, the material evidence suggests that it likely functioned as a regional intermediary linking inland settlements of Sindh and adjoining regions with southern trade corridors extending toward Gujarat. Although direct evidence for overseas commerce remains limited, the site's geographical position and cultural assemblages indicate participation in wider economic and interaction networks associated with the Mature Harappan world.

Keywords: Garho Bhiro, Indus Valley Civilization, Harappan trade, Tharparkar, Sindh archaeology, regional exchange networks, Gujarat interaction sphere

1. Introduction and Geographical Context

The Mature Harappan phase of the Indus Valley Civilization witnessed the emergence of an extensive and highly integrated system of regional interaction extending across present-day Pakistan and northwestern India. Archaeological investigations demonstrate that urban centers

relied heavily upon smaller settlements that facilitated the circulation of raw materials, manufactured goods, and agricultural products between environmentally diverse zones (Kenoyer, 1998; Possehl, 2002). Within this broader settlement hierarchy, Garho Bhiro appears to have occupied a potentially significant regional position.

Garho Bhiro is situated in the contemporary arid landscape of Tharparkar District in southeastern Sindh, an environment now characterized by desert conditions and sparse vegetation. However, palaeoenvironmental studies indicate that ecological and hydrological conditions during the Bronze Age differed considerably from those observed today. Seasonal water systems, ephemeral channels, and more hospitable environmental conditions may have supported human occupation and facilitated movement across regions that are now environmentally restrictive (Mughal, 1997).

From a geographical perspective, the settlement occupied a location that may have enabled interaction between the Indus plains, southeastern Sindh, and the Gujarat peninsula. The site's position suggests possible integration into overland communication routes connecting

settlements of central Sindh—including Kot Diji and Chanhu-daro—with communities located further south and east. Likewise, interaction with regions bordering Kutch and Kathiawar may have facilitated the movement of ceramics, lithic materials, and craft products.

Although some interpretations propose that Garho Bhiro functioned as an intermediary node connecting inland settlements to maritime exchange systems, archaeological evidence for direct participation in overseas trade remains indirect. At present, available material remains more securely support the interpretation of Garho Bhiro as a regional exchange center within a broader interconnected Harappan economic landscape rather than a confirmed port-linked entrepôt.

Conceptually, Garho Bhiro may be understood within the framework of Harappan “middle-order settlements”—sites that occupied strategic positions between large urban centers and localized rural communities. Such settlements likely contributed to the redistribution of goods, coordination of craft production, and maintenance of communication across regional networks.

2. Settlement Morphology and Spatial Organization

Archaeological observations indicate that Garho Bhiro exhibits a dual spatial configuration consisting of elevated and lower settlement components. Surface evidence suggests the presence of a habitation area extending onto the surrounding plain alongside a raised mound positioned above adjacent terrain. This distinction may reflect planned spatial organization, although the functional differentiation between these sectors remains archaeologically unresolved.

The elevated mound, locally associated with a *kot* (fortified structure or citadel), constitutes one of the site's most significant architectural features. During the 1972 investigations, preliminary assessments suggested that portions of this fortification may belong to a later historical phase. Nevertheless, the abundance of Harappan ceramic material found in association with the mound complicates straightforward chronological attribution.

A careful interpretation of the archaeological evidence suggests two possibilities. First, the elevated structure may represent a Mature Harappan architectural component later modified or reused during subsequent occupational phases.

Alternatively, later communities may have constructed fortification elements atop pre-existing Harappan deposits. Without detailed stratigraphic excavation data or radiometric dating, definitive chronological conclusions remain premature.

The presence of elevated architecture, however, is noteworthy. In several Harappan settlements, raised sectors functioned as spaces associated with storage, administrative activities, ritual practices, or flood management. While direct functional parallels should be drawn cautiously, the spatial organization of Garho Bhiro suggests a settlement whose built environment was shaped by both environmental adaptation and socio-economic requirements.

Furthermore, the site's topographical prominence above the surrounding plain may have offered practical advantages for surveillance, protection of stored goods, and regulation of movement through surrounding communication corridors. Such features strengthen interpretations that Garho Bhiro occupied a locally important position within regional settlement systems, even if its precise administrative role remains uncertain.

3. Regional Connectivity and Exchange Networks

The archaeological significance of Garho Bhiro derives largely from its probable position within the wider exchange systems of the Mature Harappan period. During the third millennium BCE, the Indus Civilization maintained extensive regional networks linking urban centers, rural settlements, resource procurement zones, and coastal regions through a combination of terrestrial and riverine routes (Kenoyer, 1998; Wright, 2010). In this context, Garho Bhiro appears to have functioned as a strategically situated regional settlement facilitating movement across southeastern Sindh and adjoining regions.

Riverine and Environmental Corridors

Several archaeological and geomorphological studies have proposed that palaeochannels associated with the Ghaggar-Hakra river system once traversed parts of Cholistan, Rajasthan, and neighboring regions before dissipating into the Rann of Kutch (Mughal, 1997). Although the precise hydrological configuration during the Mature Harappan period remains debated, it is plausible that seasonal or semi-perennial waterways enhanced mobility across the broader southeastern Indus zone.

Garho Bhiro's location in Tharparkar suggests potential proximity to communication corridors shaped by such hydrological systems. Rather than envisioning a single navigable river directly servicing the site, it is more archaeologically plausible to understand movement through a mosaic of waterways, seasonal channels, and overland routes that enabled regional connectivity. Such environmental corridors may have facilitated the transport of ceramics, lithic materials, agricultural products, and craft goods between inland settlements and southern regions bordering Kutch and Gujarat.

While some interpretations have proposed indirect participation in maritime commerce extending toward the Persian Gulf, archaeological evidence presently available at Garho Bhiro does not conclusively establish direct overseas exchange. Instead, the settlement is better understood as a regional intermediary whose economic role may have contributed indirectly to broader Harappan interaction spheres that linked coastal settlements to western Asia.

Overland Communication Routes

The site's geographical position also suggests integration into terrestrial communication networks crossing Sindh and adjoining ecological

zones. One plausible route may have connected southeastern Sindh with settlements located in central Sindh, including Kot Diji and Chanhu-daro, both known for specialized production and participation in wider Harappan exchange systems.

A second possible interaction sphere extended westward toward the piedmont regions of Balochistan. Archaeological evidence demonstrates that Harappan communities maintained long-distance access to raw materials—including copper ores, semi-precious stones, and lithic resources—originating from upland regions. Although direct evidence for caravans passing specifically through Garho Bhiro remains unavailable, its location suggests potential involvement in regional redistributive systems connecting inland production centers with southeastern exchange routes.

From a settlement hierarchy perspective, Garho Bhiro may therefore be interpreted as a “middle-tier” settlement mediating interactions between urban manufacturing centers, localized agrarian populations, and emerging southern trade corridors.

4. Material Culture and Craft Production

The material assemblage recovered from Garho Bhiro offers important insights into the technological practices, cultural affiliations, and economic activities of its inhabitants. Surface observations and excavated materials indicate a settlement characterized by sustained craft activity and integration within broader Harappan technological traditions.

Ceramic Production and Pyrotechnology

One of the most visually distinctive features of the site is the reddish coloration of the mound surface, reportedly produced by dense accumulations of fired clay fragments, ceramic debris, kiln waste, and baked soil. This archaeological signature has been associated with the etymology of the name *Garho* ("red" in Sindhi), although linguistic interpretations require caution.

The abundance of ceramic debris suggests sustained pottery production or intensive ceramic consumption. Harappan ceramics recovered from the site reportedly include perforated vessels, thick grey wares, painted pottery, and standardized domestic forms characteristic of Mature Harappan settlements. Perforated pottery, in particular, has frequently been interpreted in Harappan archaeology as

associated with specialized processing activities, including filtration, fermentation, or food preparation, though exact functions remain debated.

The presence of kiln-related material further suggests localized pyrotechnological activity. Such evidence may indicate not merely domestic pottery usage but also organized ceramic manufacture intended for local consumption and possibly regional distribution.

Lithic Procurement and Rohri Chert

The lithic assemblage of Garho Bhiro includes sharp-edged blades fashioned from high-quality chert, a material strongly associated with the Rohri Hills near Sukkur in Upper Sindh. Since no known chert outcrops exist within the Tharparkar region, the presence of Rohri-derived lithics constitutes important evidence for long-distance procurement networks.

The circulation of Rohri chert across the Indus Civilization has been well documented, with prepared blades transported considerable distances from quarry workshops to urban and regional settlements. At Garho Bhiro, these lithic materials indicate participation in established

exchange systems that connected southeastern Sindh to northern procurement zones.

Rather than implying direct contact with extraction centers, the evidence more plausibly suggests integration into redistributive exchange mechanisms operating across multiple intermediary settlements.

Metallurgical Activity

Evidence of metallurgical practice at Garho Bhiro is represented by fragments of copper objects and slag-like residues potentially associated with metal processing. The recovery of copper pins and metallurgical debris suggests familiarity with copper technology and possibly small-scale refining or fabrication activities.

However, without furnace remains, compositional analysis, or evidence of large-scale workshop areas, interpretations regarding metallurgical specialization should remain cautious. It is therefore more appropriate to characterize Garho Bhiro as a settlement exhibiting localized engagement with copper technology rather than as a major metallurgical production center.

The presence of copper nonetheless reflects participation in wider Harappan technological

traditions dependent upon interregional movement of ores and finished products, particularly from resource-rich zones of Balochistan and adjoining regions.

5. Ceramic Aesthetics, Decorative Traditions, and Cultural Interaction

The ceramic assemblage recovered from Garho Bhiro provides important evidence regarding artistic conventions, technological proficiency, and interregional cultural affiliations within the Mature Harappan sphere. Pottery recovered from the site reportedly includes dark-grey and thick-grey slipped wares decorated with painted motifs executed in black pigment. Such decorative traditions demonstrate a degree of stylistic continuity with broader Harappan ceramic repertoires while simultaneously suggesting localized adaptation.

Decorative Motifs and Symbolic Representation

Among the most prominent decorative patterns identified at the site are phytomorphic motifs, particularly stylized tree forms. The recurring depiction of arboreal imagery—possibly including representations of the date palm (*Phoenix dactylifera*)—may reflect symbolic, ecological, or aesthetic significance within local communities.

Comparable vegetal motifs are known from several Harappan sites, including settlements in Sindh and Gujarat, indicating shared artistic conventions across geographically dispersed regions.

Nevertheless, interpretations concerning symbolic meaning should remain tentative, as Harappan iconography remains only partially understood due to the undeciphered nature of the Indus script and limited contextual evidence linking imagery to explicit cultural meanings.

Ceramic Style and Regional Interaction

The ceramic profile of Garho Bhiro also demonstrates affinities with assemblages documented from sites in the Gujarat and Kathiawar regions. Similarities in slipped surfaces, painted geometric bands, and vessel morphology may indicate sustained cultural interaction and exchange between southeastern Sindh and communities further south.

Such stylistic parallels do not necessarily imply direct political or administrative integration. Rather, they may reflect shared technological traditions, circulation of craft knowledge, or participation in interconnected systems of exchange that facilitated the movement of

artisans, goods, and aesthetic influences across the Harappan cultural landscape.

The evidence from Garho Bhiro thus supports the interpretation of the settlement as culturally embedded within a wider regional interaction sphere extending across Sindh, Kutch, and Gujarat.

6. Discussion: Garho Bhiro in the Harappan Settlement System

The cumulative archaeological evidence suggests that Garho Bhiro occupied a meaningful position within the regional economic and cultural networks of the Mature Harappan period. Although the settlement lacks the monumental architecture and urban scale associated with metropolitan centers such as Mohenjo-daro or Harappa, its material profile demonstrates significant integration into broader systems of exchange and production.

The coexistence of Rohri chert tools, ceramic production evidence, copper-related remains, and stylistic connections with Gujarat indicates a settlement actively engaged in regional interaction rather than existing in relative isolation. Furthermore, its geographical placement within southeastern Sindh may have enabled

movement between inland settlements and southern exchange corridors leading toward Kutch and coastal Gujarat.

At the same time, caution is necessary when reconstructing the settlement's economic status. Present archaeological evidence does not conclusively establish Garho Bhiro as a major maritime entrepôt directly participating in overseas commerce with Mesopotamia or Dilmun. Instead, the site may be more accurately understood as a strategically positioned regional node contributing indirectly to larger Harappan trade systems.

Such an interpretation aligns with broader archaeological understandings of Harappan settlement organization, wherein smaller and medium-sized sites formed essential connective infrastructure linking urban centers, craft-producing communities, and resource zones.

7. Conclusion

Garho Bhiro represents an important yet understudied archaeological settlement within the broader framework of Indus Valley Civilization research. Archaeological findings—including ceramic assemblages, Rohri chert blades, metallurgical traces, and evidence of

pyrotechnological activity—indicate that the site participated in extensive regional networks characteristic of the Mature Harappan period.

Rather than interpreting Garho Bhiro as an isolated desert settlement, the available evidence suggests a community integrated into wider systems of communication, exchange, and craft production spanning southeastern Sindh and adjoining regions. Its location may have facilitated interactions between inland settlements of Sindh and southern corridors extending toward Gujarat, thereby contributing to regional economic connectivity.

However, several aspects of the site remain insufficiently understood due to the limited scale of excavation and the absence of comprehensive stratigraphic publication. Future archaeological investigations employing modern survey techniques, geoarchaeological analysis, radiometric dating, and material sourcing studies would substantially improve understanding of Garho Bhiro's chronology, settlement dynamics, and regional significance.

Ultimately, Garho Bhiro underscores the importance of regional settlements in sustaining the socio-economic complexity of the Indus Civilization. By emphasizing the role of

intermediary communities alongside major urban centers, archaeological scholarship can develop a more nuanced understanding of Harappan connectivity, adaptation, and long-distance interaction.

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Gola Dhoro

Introduction

Gola Dhoro, also known as **Bagasra**, is an important archaeological site of the **Indus Valley Civilization (Harappan Civilization)**, located in the Saurashtra region of the present-day Indian state of Gujarat. The site has attracted significant attention from archaeologists due to its industrial activities, craftsmanship, commercial importance, and urban organization. Although Gola Dhoro was smaller in size compared to major urban centers such as Mohenjo-daro or Harappa, its economic and industrial significance grants it a distinctive place in the study of the Indus Civilization.

This site belongs to the **Mature Harappan Period**, which is generally dated from approximately **2600 BCE to 1900 BCE**. Archaeological excavations suggest that this settlement was not merely a residential habitation but also a well-organized center of trade, production, and craftsmanship.

Geographical Location

Gola Dhoro is situated in the **Rajkot District of Gujarat**, and due to its relative proximity to maritime trade routes connected with the Arabian Sea, it occupied an important position for commerce. Its geographical setting made it suitable for both inland and maritime trade within the Indus Civilization, allowing locally produced goods to be distributed to other Harappan settlements.

The region possesses a semi-arid climate, which likely supported agriculture, pastoralism, and commercial activities. Archaeological evidence indicates that the inhabitants depended not only on natural resources but also significantly on trade networks.

Discovery and Archaeological Excavations

The archaeological significance of Gola Dhoro came to light through modern surveys and excavations. Excavations conducted by Indian archaeologists revealed evidence of a well-planned and protected settlement. During these excavations, remains of walls, residential structures, workshops, seals, beads, and metal-related artifacts were uncovered, demonstrating

the site’s economic and administrative importance.

Scholars argue that the settlement was likely a **fortified or enclosed habitation**, where access and movement may have been controlled. Such urban planning reflects the existence of social organization and administrative regulations.

Historical Background and Chronology

Gola Dhoro belongs to the **Mature Harappan phase** of the Indus Civilization, which is considered the height of urban development in ancient South Asia. During this period, large cities, commercial centers, organized drainage systems, standardized measurements, and systems of writing flourished.

Pottery, seals, beads, and architectural remains found at the site indicate strong links with mainstream Harappan cultural traditions. However, certain local features also distinguish the settlement, reflecting the unique cultural characteristics of the Saurashtra region.

Urban Planning and Architectural System

One of the notable characteristics of Gola Dhoro is its **urban organization**. Excavations suggest that

the settlement was divided into different sections. Strong walls and boundaries indicate the presence of administrative or defensive mechanisms.

Residential houses were generally constructed using mud bricks and stone materials. Rooms were systematically arranged, reflecting an organized domestic life. Several storage spaces or warehouses have also been identified, which were probably used for preserving goods and commodities.

It is also possible that specific sections of the settlement were reserved for craft production, industrial activity, or commercial purposes.

Economic System and Trade

The most significant feature of Gola Dhoro was its **economic and industrial role**. Archaeological evidence suggests that it functioned as a **center of production and trade**. Beads, ornaments, and crafted goods produced here were likely distributed to other Harappan settlements.

The discovery of seals and standardized weights demonstrates that trade was carried out in an organized and regulated manner. The Indus Civilization maintained a sophisticated system of

weights and measurements to facilitate commercial transactions.

Gola Dhoro probably maintained trade relations with other major Harappan centers such as **Mohenjo-daro, Lothal, Dholavira, and Harappa**. Furthermore, its relative closeness to the Arabian Sea suggests the possibility of maritime trade connections.

Industries and Craftsmanship

Gola Dhoro is particularly known for its **bead-making industry**. Excavations have uncovered beads made from carnelian, agate, and other valuable stones. These beads were not only used locally but were also likely manufactured for trade purposes.

In addition, archaeologists discovered:

- Ornaments made from marine shells
- Copper and metal objects
- Pottery vessels
- Decorative items

These industries indicate the presence of highly skilled artisans possessing advanced technical expertise.

Social and Cultural Life

The social life of the inhabitants of Gola Dhoro appears to have been organized and developed. The structure of houses, storage facilities, workshops, and trade systems indicates the presence of social organization and division of labor.

Culturally, the settlement followed many of the broader traditions of the Indus Civilization, including:

- Standardized pottery
- The use of seals
- Symbolic motifs based on animals
- The use of ornaments and jewelry

These features collectively represent an advanced urban society.

Comparative Analysis with Other Harappan Sites

When compared with **Mohenjo-daro**, Gola Dhoro was smaller in physical scale but economically important. Mohenjo-daro served as a large urban center, whereas Gola Dhoro appears to have functioned more as a specialized industrial and trade settlement.

Like **Lothal**, which is famous for maritime commerce, Gola Dhoro may also have benefited from its strategic location near sea routes.

Similarly, the settlement probably maintained cultural and economic links with **Dholavira**, another important Harappan center in Gujarat.

Theories Regarding Decline

Like other cities of the Indus Civilization, Gola Dhoro experienced decline around **1900 BCE**. Scholars have proposed several theories to explain this decline, including:

1. Climatic changes and increasing aridity
2. Shifts in river systems
3. Weakening of trade networks
4. Resource scarcity
5. Social and economic crises

It is possible that a combination of these factors gradually contributed to the abandonment of the settlement.

Archaeological and Historical Importance

Gola Dhoro is highly significant for understanding the economic framework of the Indus Valley Civilization. The site demonstrates that Harappan

civilization was not confined to large cities alone; smaller industrial and commercial settlements also played a fundamental role in sustaining its prosperity.

The site is particularly valuable for addressing questions such as:

- How was trade organized within the Indus Civilization?
- What was the nature of Harappan industries and craftsmanship?
- How were smaller settlements connected to major urban centers?
- What role did maritime trade play in Harappan society?

Conclusion

Gola Dhoro or Bagasra is an important and distinctive archaeological site of the Indus Valley Civilization, notable for its industrial expertise, commercial significance, and organized urban structure. Although it was not a major urban settlement like Mohenjo-daro, its role as an economic and craft-production center was highly significant. The archaeological remains uncovered at this site not only illuminate the development of Harappan civilization but also contribute significantly to our understanding of the social,

economic, and cultural evolution of ancient South Asia.

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Ganweriwala

Introduction

The Indus Valley Civilization is regarded as one of the world's earliest and most sophisticated urban civilizations, flourishing approximately between 3300 BCE and 1300 BCE across vast regions of South Asia. During its Mature Phase (c. 2600–1900 BCE), the civilization witnessed the emergence of several major urban centres, including Mohenjo-daro, Harappa, Dholavira, Rakhigarhi, and Ganweriwala. Among these, Ganweriwala occupies a particularly significant yet understudied position. Situated in the Cholistan Desert of southern Punjab, Pakistan, it is considered one of the largest urban settlements of the Indus Civilization and is often described as the "fifth major city" of the Harappan world.

Ganweriwala is of exceptional archaeological significance not merely because of its size, but because it offers enormous potential for understanding urban organization, economic networks, cultural practices, environmental

adaptation, and political systems within the Indus Civilization. Despite this importance, the site remains largely unexplored, with no large-scale scientific excavation having yet been conducted.

Consequently, Ganweriwala stands as one of South Asia's most enigmatic archaeological landscapes—an immense ancient city concealing within its sands invaluable historical evidence concerning one of humanity's earliest urban societies.

Geographical Setting and Environmental Context

Ganweriwala is located in the Cholistan Desert of southern Punjab, Pakistan, near the Indo-Pak border along the dried bed of the ancient Ghaggar-Hakra (Hakra) River system. The site lies approximately 340 kilometres northeast of Mohenjo-daro and nearly 260 kilometres southwest of Harappa, positioning it strategically between two of the greatest urban centres of the Indus Civilization.

At present, the Cholistan region is characterized by harsh climatic conditions and an inhospitable desert environment. However, geoarchaeological studies suggest that during the Mature Harappan period, the region was substantially more fertile owing to the presence of the Hakra River, which

likely sustained agricultural production, livestock management, and urban settlement.

The availability of water would have transformed Ganweriwala into an economically viable and agriculturally productive centre. Like other Indus settlements, the city may have benefited from fertile floodplains suitable for crop cultivation and pastoral activities. Thus, the environmental setting played a crucial role in facilitating urban growth and long-term habitation.

Discovery and Archaeological Investigations

Scholarly interest in the archaeological remains of Cholistan began in the early twentieth century. Initial explorations of the region were undertaken by Sir Aurel Stein in 1941, followed by investigations conducted by Henry Field in 1955. Nevertheless, the formal identification of Ganweriwala occurred only during the 1970s, when the distinguished Pakistani archaeologist Mohammad Rafique Mughal systematically surveyed the Hakra river basin.

During his extensive exploration of the Cholistan Desert, Mughal documented approximately 174 Mature Harappan sites along the ancient riverbed. Among these, Ganweriwala emerged as the largest and most significant settlement. Based on

preliminary measurements, Mughal proposed that the city rivalled the scale of Mohenjo-daro and Harappa, thereby suggesting its status as a principal urban centre within the Harappan civilization.

In 2007, the Department of Archaeology and Museums of Pakistan authorized the Department of Archaeology at Punjab University to conduct a systematic survey of Ganweriwala. This investigation focused on site mapping, surface collection of artefacts, and establishing a grid system to facilitate future excavations.

Controversy Regarding Site Size

The actual size of Ganweriwala remains debated among scholars:

- Mohammad Rafique Mughal estimated the site at approximately **81.5 hectares**.
- Punjab University's survey suggested a smaller size of around **42 hectares**.
- Masih (2008) proposed an estimate of approximately **64 hectares**.
- A technologically advanced contour survey conducted in 2021 measured the site at roughly **66.7 hectares**.

The discrepancy may partly result from shifting sand dunes obscuring portions of the settlement and differences in surveying methodologies. Although the 2021 survey is generally considered more reliable, scientific excavation remains essential for determining the city's precise dimensions.

Urban Planning and Settlement Pattern

Archaeological surveys indicate that Ganweriwala consists of two principal mounds:

1. **Mound A** – situated toward the eastern sector;
2. **Mound B** – the larger mound located in the western area.

This arrangement strongly resembles the upper and lower town divisions characteristic of several major Indus settlements. Evidence further suggests the existence of a central thoroughfare connecting the two sectors, facilitating transportation, trade, and movement within the urban landscape.

Preliminary observations imply that Ganweriwala likely followed the characteristic **grid-based urban planning system** of the Indus Civilization, comparable to the layouts observed at Mohenjo-

daro and Harappa. Residential blocks, interconnected streets, and standardized architectural arrangements indicate that the city was not randomly developed but carefully planned according to established civic principles.

Economic Structure and Trade Networks

The economic organization of the Indus Valley Civilization appears to have been highly developed, regionally interconnected, and dependent upon a combination of agriculture, craft specialization, and long-distance trade. Owing to its substantial size and strategic geographical position, Ganweriwala likely functioned as an important regional economic centre within the Harappan urban network. Although systematic excavation has not yet been undertaken, archaeological surveys and surface artefacts provide considerable evidence regarding its economic foundations.

Agriculture and Subsistence Economy

While the Cholistan Desert presently appears barren and inhospitable, environmental and geoarchaeological studies indicate that the region was considerably more fertile during the Mature Harappan period due to the flow of the Hakra

River. Consequently, agriculture was likely central to Ganweriwala's economy.

As in other Harappan settlements, the inhabitants of Ganweriwala probably cultivated:

- wheat,
- barley,
- oil-producing crops,
- pulses and vegetables,
- and possibly fruits through horticultural activities.

Animal husbandry was equally important. Cattle, buffaloes, sheep, and goats likely formed a fundamental part of the local economy, contributing to agricultural production, transportation, dairy products, and food supplies.

The integration of farming and pastoralism reflects the broader subsistence strategies characteristic of the Indus Civilization, where agricultural productivity sustained expanding urban populations.

Craft Production and Industrial Activities

Archaeological surface collections indicate that Ganweriwala possessed an advanced tradition of

craft production. Artefacts recovered from the site include:

- painted and plain ceramics,
- stone tools,
- copper implements,
- fired bricks,
- wedge-shaped bricks,
- agate beads,
- steatite disc beads,
- terracotta figurines,
- and clay tablets.

These materials suggest the presence of specialized artisans and organized production systems. Craft specialization appears to have been a major feature of urban Harappan society, where communities of potters, metalworkers, bead-makers, and sculptors contributed to both local consumption and wider exchange systems.

Interestingly, artefacts recovered from different areas of the site vary in character, implying functional zoning within the settlement. Certain sectors may have served residential purposes, while others were dedicated to industrial production or commercial exchange.

Interregional and Long-Distance Trade

One of the most remarkable features of the Indus Civilization was its extensive trade network. The remarkable uniformity in material culture—including weights, brick proportions, seals, ceramics, and architectural standards—demonstrates intensive economic interaction among urban centres.

Ganweriwala likely participated actively in this regional system of exchange. Its strategic location between Harappa and Mohenjo-daro suggests that it may have functioned as an intermediary commercial hub.

Archaeological evidence from the wider Indus Civilization further demonstrates trade relations with ancient Mesopotamia, where Harappan merchants are believed to have exported goods such as beads, textiles, timber, and precious materials. Artefacts discovered at Ganweriwala—including agate beads and copper objects—may indicate participation in broader interregional economic networks.

Architecture and Urban Engineering

One of the defining features of the Indus Civilization was its extraordinary expertise in architecture and urban planning. Survey evidence from Ganweriwala reveals indications of

sophisticated construction practices consistent with those observed in major Harappan cities.

Standardized Brick Technology

Throughout the Mature Harappan period, bricks were commonly manufactured according to a standardized ratio of **1:2:4**, a hallmark of architectural uniformity across the civilization.

Bricks recovered from Ganweriwala conform to this same proportional standard, suggesting:

1. the presence of regulated construction techniques;
2. the use of standardized moulds for brick production;
3. centralized or culturally standardized building practices.

The widespread use of fired bricks further suggests access to abundant raw materials and sufficient fuel resources required for large-scale brick production.

Mud-Brick Wall

A mud-brick wall approximately **90 centimetres in width** was identified on Mound A, extending in a north–south direction. Carbon dating places the

upper occupation levels within the Mature Harappan Phase (approximately **2300–1900 BCE**).

The function of this structure remains uncertain; however, it may have served:

- as a residential boundary,
- an administrative division,
- a structural enclosure,
- or part of a defensive arrangement.

Further excavation is necessary to clarify its architectural and social significance.

Streets and Transportation Systems

Survey findings indicate the existence of a central road connecting the principal sectors of the settlement. This organizational feature closely resembles the orthogonal street planning seen at Mohenjo-daro and Harappa.

Such urban planning reflects an advanced civic consciousness, suggesting that transportation, trade, drainage, and residential organization were carefully coordinated.

Rather than developing organically or randomly, Ganweriwala appears to have been a deliberately

planned urban centre governed by principles of order and spatial organization.

Major Archaeological Discoveries at Ganweriwala

Despite the absence of formal excavation, several important artefacts have been identified through systematic surface surveys.

1. Impressed Clay Tablet

One of the most intriguing discoveries is a small impressed clay tablet recovered from Mound A, measuring approximately **2 centimetres in length and 1 centimetre in width**.

The tablet depicts:

- a nude male deity,
- seated in a yogic posture,
- with outstretched arms,
- positioned upon a throne,
- accompanied by a disciple-like figure beneath.

On the reverse side appear **three recognizable signs of the Indus script**.

This artefact may provide important insight into religious symbolism, ritual practices, or ideological systems within Harappan society.

2. Copper Seal

A heavily corroded copper seal was also discovered at the site, representing the **first known copper seal of its kind in the region**.

Although corrosion obscures any inscriptions or imagery, X-ray fluorescence analysis revealed that the seal consisted of approximately **99.89% pure copper**.

The object may have served administrative, commercial, or ceremonial functions, comparable to seal traditions found elsewhere in the Indus world.

3. Terracotta Unicorn Figurines

Four terracotta unicorn figurines were recovered from Ganweriwala.

Although unicorn imagery is common on Indus seals, terracotta examples are comparatively rare. Similar finds have been documented at Harappa, Mohenjo-daro, and Chanhudaro, yet Ganweriwala

is remarkable for yielding multiple examples from a single site.

These figurines may have held:

- religious significance,
- symbolic or mythological meaning,
- or represent commercial or administrative emblems.

Their precise cultural interpretation, however, remains a subject of scholarly debate.

Indus Script, Religious Thought, and Intellectual Traditions

One of the most intellectually fascinating aspects of Ganweriwala concerns the evidence related to the **Indus script** and symbolic communication. The clay tablet recovered from the site bears three recognizable signs of the undeciphered Harappan script, contributing valuable evidence to ongoing debates regarding literacy, administration, and religious symbolism in the Indus world.

The Indus script has been discovered across numerous Harappan settlements and typically appears on:

- seals,

- clay tablets,
- pottery,
- ornaments,
- and commercial objects.

Unlike lengthy written systems found in Mesopotamia or Egypt, the Harappan script consists primarily of short inscriptions composed of symbols, pictographs, and iconographic signs. Despite decades of scholarship, the script remains undeciphered, making the civilization one of the greatest enigmas in world archaeology.

Some linguists have proposed that the script may possess affinities with the modern Dravidian language family, while others argue for alternative linguistic interpretations. However, no scholarly consensus has yet emerged.

Religious Ideology and Spiritual Expression

The impressed clay tablet from Ganweriwala provides intriguing insight into possible religious practices and ideological systems.

The depiction of a seated male figure in a yogic posture has attracted scholarly attention because comparable iconography has been identified elsewhere within the Indus Civilization. Some researchers associate such imagery with an early

form of asceticism or meditative practice, while others cautiously compare it with later South Asian religious traditions, particularly proto-Shiva or “Pashupati”-type symbolism.

However, direct historical continuity remains uncertain and should be approached carefully.

The iconography nevertheless suggests several possibilities:

1. the presence of ritual or spiritual traditions,
2. reverence toward divine or semi-divine figures,
3. organized ceremonial practices,
4. or structured systems of religious instruction involving teacher-disciple relationships.

Similarly, the unicorn figurines discovered at Ganweriwala may possess symbolic or religious significance. Unicorn imagery appears repeatedly throughout Harappan iconography and may have represented authority, sacred identity, clan symbolism, or commercial legitimacy.

Systems of Measurement and Standardization

One of the defining characteristics of the Indus Civilization was its highly standardized system of measurement.

Archaeological evidence demonstrates that Harappan urban centres employed remarkably precise measuring systems, achieving approximately **96 percent standardization accuracy** across large geographical regions. Both binary and decimal principles appear to have been utilized in measurement and accounting systems.

Ganweriwala, judging from its architectural and material consistency, almost certainly participated in this standardized administrative framework. Uniform brick dimensions, organized urban planning, and shared material culture strongly suggest integration within a wider Harappan system of regulation and exchange.

Such standardization reflects a civilization possessing advanced knowledge of mathematics, planning, and bureaucratic organization.

Political and Social Organization: Ganweriwala in Context

The political organization of the Indus Civilization has long remained a matter of scholarly debate.

Earlier interpretations often assumed the existence of a highly centralized state ruled by powerful kings or priestly elites. However, more recent archaeological evidence challenges this model.

Ganweriwala and other Harappan cities suggest a more complex social and political system that may have consisted of:

- autonomous urban centres,
- interconnected regional administrations,
- or loosely integrated city-states bound through economic and cultural exchange.

Social Structure

Archaeological material recovered from Ganweriwala implies the existence of social and occupational differentiation.

The city likely contained specialized groups such as:

- artisans,
- merchants,
- agricultural workers,
- administrators,
- and possibly ritual specialists.

Yet one of the most distinctive features of the Indus Civilization remains the relative absence of evidence for:

- monumental royal palaces,
- dynastic kingship,
- massive military structures,
- or overt displays of elite domination.

This distinguishes Harappan society from contemporary civilizations such as Ancient Egypt and Mesopotamia, where kingship and monumental power symbolism were prominent.

Instead, the Harappan social order appears to have emphasized urban organization, economic cooperation, and cultural standardization rather than overt political hierarchy.

Ganweriwala as a Major Urban Centre

Given its size, strategic location, and urban characteristics, Ganweriwala is widely regarded as the **fifth major city of the Indus Civilization**.

Its geographical position suggests several possible functions:

- a commercial intermediary between Harappa and Mohenjo-daro,

- a regional agricultural centre sustained by the Hakra River system,
- an administrative or political node within the Harappan urban network,
- or a strategic settlement facilitating movement and exchange across the Cholistan region.

Future scientific excavation may significantly reshape current interpretations of Harappan civilization by revealing new evidence regarding political systems, urban organization, and regional interaction.

Decline and Transformation: Environmental and Human Factors

The decline of the Indus Civilization remains one of archaeology's enduring mysteries. Ganweriwala offers an important perspective on this transformation.

1. Environmental Change

One of the most widely accepted explanations concerns environmental instability.

Scholars have proposed that:

- tectonic activity,

- shifts in river courses,
- prolonged droughts,
- and climatic fluctuations

may have destabilized the ecological systems sustaining Harappan urbanism.

The drying of the Hakra River would have been particularly catastrophic for Ganweriwala, whose agricultural economy likely depended heavily upon access to freshwater resources.

As water availability diminished:

- agricultural productivity declined,
- food systems weakened,
- trade networks suffered,
- and urban populations gradually dispersed.

2. Economic and Social Transformation

By approximately **1900 BCE**, substantial changes are visible across the Indus region.

Archaeological evidence indicates:

- the decline of standardized weights,
- reduced use of seals,
- abandonment of major cities,

- and increasing settlement movement toward northeastern regions.

These developments suggest weakening economic integration and the gradual collapse of urban systems.

3. Human Factors

Some scholars have proposed additional explanations, including:

- overexploitation of natural resources,
- demographic pressures,
- environmental mismanagement,
- and local social instability.

Earlier theories of violent invasion—particularly the so-called “Aryan invasion theory”—have largely lost scholarly credibility due to insufficient archaeological evidence.

Instead, current interpretations increasingly favour a **multicausal explanation**, combining environmental stress, economic fragmentation, and social adaptation.

Conclusion

Ganweriwala represents one of the most important yet least explored urban centres of the Indus Valley Civilization. Despite its immense archaeological significance, the site remains largely unexcavated, preserving within its landscape invaluable evidence concerning the political, economic, religious, and cultural dimensions of Harappan civilization.

Available archaeological evidence strongly suggests that Ganweriwala was not a peripheral settlement, but rather a major urban centre characterized by:

- planned urban organization,
- sophisticated architectural traditions,
- agricultural productivity,
- craft specialization,
- commercial connectivity,
- and participation in a broader system of Harappan cultural standardization.

Its strategic location between Harappa and Mohenjo-daro, together with evidence of structured settlement planning and specialized artefacts, strongly supports the argument that Ganweriwala functioned as an influential regional centre within the wider Indus urban network.

The material remains recovered from the site—including copper objects, terracotta figurines, standardized bricks, clay tablets, and symbolic iconography—demonstrate the technological sophistication and cultural richness of its inhabitants. Furthermore, the presence of the Indus script and possible ritual imagery suggests the existence of intellectual and ideological traditions comparable to those observed at other major Harappan centres.

Yet, paradoxically, Ganweriwala's greatest scholarly importance lies in what remains unknown. Because no major scientific excavation has yet taken place, fundamental questions concerning its chronology, political role, demographic structure, economic organization, and religious life remain unanswered.

Future archaeological investigations at Ganweriwala possess the potential to transform existing understandings of the Indus Civilization. Scientific excavation may reveal whether the site rivalled Mohenjo-daro and Harappa in political influence, clarify its role within regional trade systems, and provide unprecedented insight into urban life in the Hakra basin.

At the same time, urgent measures for heritage conservation are essential. Agricultural expansion,

infrastructure development, military activity, looting, and environmental degradation continue to threaten the preservation of the site. Without effective archaeological protection and systematic excavation, irreplaceable historical knowledge may be permanently lost.

In broader historical terms, Ganweriwala should be regarded not merely as an archaeological mound buried beneath desert sands, but as a crucial testimony to the intellectual, social, and urban achievements of one of humanity's earliest civilizations. It stands as a silent yet profound witness to the ingenuity, resilience, and complexity of ancient South Asian urbanism.

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Ghazi Shah

Abstract
Ghazi Shah is an important archaeological site associated with the Indus Civilization, situated in Dadu District of Sindh, Pakistan. The site is particularly significant for demonstrating a transitional cultural sequence between the rural and urban phases of the Indus Civilization. Archaeological investigations undertaken by N. G. Majumdar during the late 1920s and early 1930s identified multiple settlement phases at the site, revealing evidence of changing subsistence patterns, technological advancement, and material culture. The excavated remains indicate two occupational layers: an earlier rural phase characterized by temporary habitation and a later urbanized phase marked by copper usage and more developed cultural practices.

Ghazi Shah: Location and Archaeological Context
The archaeological remains of Ghazi Shah are located in Dadu District, Sindh, approximately 6 kilometers southeast of Tando Rahim Khan and nearly 2 kilometers east of Pir Ghazi Shah,

positioned northeast of the piedmont zone of the Bathi Range. The site occupies an important geographical setting within the broader archaeological landscape of western Sindh, where numerous settlements associated with the Bronze Age have been identified.

The site was documented during archaeological explorations conducted between 1928 and 1931 by the distinguished archaeologist N. G. Majumdar, whose pioneering surveys substantially expanded scholarly understanding of the distribution of Indus Civilization settlements across Sindh. Ghazi Shah was among the several protohistoric sites identified during these investigations and was recognized as belonging to the Bronze Age cultural horizon of the Indus Civilization. (1)

Cultural Stratigraphy and Occupational Phases
One of the most remarkable characteristics of Ghazi Shah is its representation of both the rural and urban dimensions of the Indus Civilization. Archaeological investigations revealed the presence of two distinct occupational layers, indicating cultural continuity as well as gradual socio-economic transformation. (2)

The earliest occupational stratum appears to belong to a rural cultural phase characterized by

relatively simple habitation patterns. Material evidence recovered from this lower level provides insight into the subsistence strategies, occupations, and craft-related activities of the site's earliest inhabitants. Notably, no permanent architectural remains, such as mud-brick or baked-brick structures, were identified from this phase. Instead, excavators recovered only utilitarian artifacts and ceramic assemblages associated with daily domestic use. (3)

The absence of durable architectural remains strongly suggests that the earliest inhabitants of Ghazi Shah may have lived in temporary dwellings constructed from perishable materials such as reeds, grass, wooden frameworks, and thatched roofing. Such habitation patterns are consistent with early agrarian or semi-sedentary communities in several regions associated with the pre-urban and transitional phases of the Indus cultural tradition.

The upper occupational layer, by contrast, reflects a comparatively advanced stage of cultural development associated with the urban phase of the Indus Civilization. The inhabitants of this later period are believed to have utilized copper implements and adopted a more organized and technologically developed mode of life.

Archaeological excavations yielded a range of material objects, including terracotta bull figurines, representations of mountain goats, various forms of combs, and ornamental artifacts associated with personal adornment.

Zooarchaeological evidence further indicates the domestication or management of several animal species, including sheep, goats, bears, and donkeys, reflecting a mixed subsistence economy in which pastoralism likely played a prominent role.

Ceramic Tradition and Symbolic Representation
The ceramic assemblage recovered by Majumdar constitutes one of the most noteworthy features of the site. The pottery is distinguished by black-painted decorative motifs applied over a red-slipped surface, a stylistic feature commonly associated with several regional traditions of the Bronze Age in Baluchistan and Sindh.

Certain vessels bear depictions of bulls, closely resembling motifs discovered at the archaeological site of Nal, thereby suggesting possible cultural affinities or artistic continuities between these regions. In addition to bovine imagery, peacock motifs occur frequently within the decorative repertoire, indicating their symbolic or aesthetic significance among the

inhabitants. Furthermore, representations of peepal leaves appear extensively in ceramic ornamentation, a motif often interpreted as culturally or religiously meaningful within the broader iconographic traditions of the Indus Civilization.

Conclusion

Ghazi Shah occupies an important position within the archaeological framework of the Indus Civilization due to its evidence for both rural and urban cultural phases. The site offers valuable insights into patterns of settlement evolution, technological adaptation, domestic life, and artistic expression in prehistoric Sindh. Its stratigraphic sequence highlights a gradual transition from impermanent rural habitation to a more developed urbanized lifestyle, thereby contributing significantly to scholarly understanding of cultural transformation during the Bronze Age in the Indus region.

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Gorandi

The ancient archaeological site of Gorandi is located in Dadu District, approximately 13 kilometers north of Naiyng. It is a small mound rising to a height of about two and a half meters. Despite its modest size, the site holds considerable archaeological significance, as evidence suggests human occupation associated with multiple cultural phases.

Archaeologist Nani Gopal Majumdar, during his survey of the site, reported that the entire area was scattered with stone flakes and pottery fragments, providing clear evidence of ancient human activity. A natural spring is situated near the site, suggesting that the inhabitants relied on it as a source of water for drinking, agriculture, and daily domestic use. The availability of water would have played a crucial role in sustaining settlement and agricultural practices in the region.

Among the artifacts recovered from the site are a terracotta bull figurine, terracotta and shell bangles, an agate bead, and a copper ring. These objects provide valuable insight into the social life,

craftsmanship, ornamentation, and trade connections of the settlement's inhabitants. In particular, the agate bead and copper ring indicate technological knowledge of bead-making and metallurgy during the period.

According to archaeologists, the Gorandi site is associated with both the rural cultural phase of the Indus region and the later urban phase of the Indus Valley Civilization. This suggests that the settlement experienced cultural continuity and transformation over time. Such sites are particularly important for understanding prehistoric habitation, economic activities, and cultural development in ancient Sindh.

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